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THE SOUTH AFRICAN ACADEMY.

May 1st to 17th, 1923.

At the annual general meeting, reported elsewhere, Mr. D. M. Burton referred to the generous action of the Mayor and Town Councillors of Johannesburg in granting the use of the Selborne Hall for seventeen days, in which to hold the fourth exhibition of objects of art, under the auspices of this Association. Other members, in referring to this exhibition, drew attention to the poor response made by members of this Association to previous exhibitions, and expressed the hope that better support would be forthcoming this year.

It is desired that this information respecting the approaching exhibition be taken by members as a personal invitation to be represented thereat by an exhibit, and the Registrar, who is the hon. secretary for the Academy, will be pleased to furnish any information required.

The opening ceremony is scheduled to take place on Tuesday, 1st May, 1923, at 3 p.m. Members requiring invitations to be present at that function should apply to Mr. Carpenter. Season tickets, covering admission for the whole of the seventeen days the exhibition will be open, can be obtained on application.

THE ASSOCIATION OF TRANSVAAL ARCHITECTS.

Minutes of the Thirteenth Annual General Meeting of Members held in the Scientific and Technical Club, 100, Fox Street, Johannesburg, on Tuesday, 27th February, 1923, at 8 p.m.

PRESENT.—The President (Mr. John S. Donaldson) in the chair, Messrs. F. L. H. Fleming, Allen Wilson (Vice-Presidents), G. S. Burt Andrews, N. T. Cowin, R. Howden, Gordon Leith, E. M. Powers, D. M. Sinclair, H. G. Veale (Members of Council), B. R. Avery, G. Bromilow, D. M. Burton, A. H. Gibbs, S. Gotzsche, M. J. Harris, Chas. Hosking, J. Cameron Kerr, Arthur Leitch, D. A. McCubbin, C. d'o Mainon, J. A. Moffat, S. V. Mann, W. B. T. Newham, G. E. Pearse, Harold Porter, John W. Small, Harold W. Spicer, F. Williamson, and the Registrar (Murray K. Carpenter).

Twenty-four members were represented by proxy.

Apologies for non-attendance were received from Mr. Walter Reid and Mr. F. Soff.

The President (Mr. J. S. Donaldson), on taking the chair, declared the meeting to be properly constituted, and called upon the Registrar to read the notice convening the meeting.

MINUTES.—The minutes of the twelfth annual general meeting, held on the 25th February, 1922, published in the March issue of our journal, were taken as read and confirmed.

ANNUAL ACCOUNTS AND BALANCE SHEET.—Mr. Allen Wilson proposed the adoption of the annual accounts and balance sheet for the year 1922. These accounts, duly audited by Messrs. Alex. Aiken and Carter, had been issued to members prior to the meeting. Mr. D. M. Sinclair seconded the motion, which was agreed to without discussion.

ANNUAL REPORT.—Mr. G. S. Burt Andrews moved that the annual report of Council to members, as published, be received and adopted. This was seconded by Mr. M. J. Harris, and unanimously agreed to.

There being no discussion upon the report of the year's operations, the President (Mr. J. S. Donaldson) delivered his valedictory address:—

Following the usual custom of the retiring presidents of our association, it is my privilege to address a few remarks to you on the doings of the association. The full and informative report which is before you, but faintly reflects the enormous amount of work gone through by your Council in the year just passed. As the years go along, so the importance of your association grows. One has only to glance through some of the earlier reports of your former Councils and compare them with the current report to realise what I say regarding the increased work and scope of the association, which is increasing more and more, and, Gentlemen, this work is not only Academic in its nature, but is of real practical good to the profession.

If the fruits of our labours are not always immediately apparent the foundations are truly laid, and such work will bear rich fruit ultimately, of that I am quite convinced. It is perhaps necessary for me to make these few remarks regarding the energies and efforts of the association, as I have more than once had it asked me: "where the material value of the association comes in"

It may be truly said that the reforms and innovations initiated by your various councils have been largely a labour of far-sighted policy. Much has been conceived on broad lines for the future benefit of the profession. It has been, and I trust will continue to be, the aim of your Councils by the unselfish expenditure of so much time, to keep the flame of enthusiasm for the betterment, progress and purity of our profession ever held aloft, so that the rapidly increasing number of young architects, growing up in our midst, may assume the honour of maintaining and carrying forward the best traditions of their honourable profession.

It is abundantly obvious that South African architecture is gaining in beauty and character, especially has this been apparent during the last decade. I venture to suggest this great advance is in

no small measure due to the inauguration of the A.T.A. and the energy with which its affairs have been conducted. When a critic asks "What is the good of the A.T.A.?" can we not with pride claim, that, the efforts to purify our practice, maintaining true and proper control over the profession generally, our success in obtaining the Chair of Architecture, our propaganda work in respect to Union registration, our encouragement and assistance to promote higher work in the Arts and Crafts, especially architecture, and many minor matters dealing with a hundred and one phases for improvement to which the A.T.A. have diligently devoted their labours.

These efforts are certainly beginning to show first fruits in the character of the work turned out, not only by the older practitioner, but by most of the young practitioners. Better architecture, and by architecture I embrace planning, means material gain for the profession. The public, which by the efforts of the A.T.A., have undoubtedly been educated to a greater appreciation of architecture, and thus the scope of the architect will increase, so that I hope ultimately it will be quite the exception for a building to be erected without the services of an architect being employed. Such a state will be facilitated by the passage through Parliament of the Union Registration Bill, a complete draft of which has occupied the special registration committee for a long and very strenuous time. Not one year only, but many years have your councils been devoted to the Draft Act, and I think it would not be out of place for me here and now, to say how much their labours are appreciated. I think the draft as now compiled, about as perfect as we can expect any committee to make it. Of course, there have been, and still are, differences of opinion regarding some of the provisions. The portion of the draft which has given rise to more contention than all these is the chapter dealing with quantity surveying. A number of architects in the Union do not by any means consider that it is necessary, and some say it is dangerous to include the chapter. My own personal feeling is, that it is not only correct, but expedient to embrace the surveyors in the Act as a chapter. I consider it highly desirable for the architect as paramount chief in the building operations to have complete and full control of all subordinate crafts, including the quantity surveyor, and in justice to the quantity surveyor, he should in turn be protected from the charlatan.

This protection can only be given him by membership in a common compulsory institution, where members are subject to control and discipline. By the inclusion of the surveyor in a chapter, no injustice is done to either the architect or the surveyor. The position as between architect and surveyor is exactly that which exists between a doctor and a chemist or dentist. Neither the chemist or dentist may practice medicine, but the medical man is not debarred from doing dentistry or pharmacy, nor can the surveyor in our proposed Act practice architecture, but the architect may take out quantities. However, before the Bill is finally presented to Parliament, this vital question will be thoroughly well considered by the registration committee.

I have spoken somewhat at length on the Union Draft Act, because I feel if we can go forward with unanimity we shall triumphantly succeed in the passage of the Act through Parliament, and such passage will mark still another important step in the advancement of architecture in South Africa.

Another progressive step has been the formation after a considerable amount of thought and labour, of a set of general conditions of contract for universal use in the Union.

In conclusion, I would like to remind members of the fact that the members of our association belong *ipso facto* to one of the largest scientific societies in the world—I refer to the Scientific and Technical Institute. This membership carries perhaps a status which we are not all aware of, and being members of such a powerful association it behoves members to give it their hearty support. This can be done by regular attendance at the scientific lectures frequently held in the club room, and also by taking an active part in the election of the officers and generally identifying oneself with the institution.

I wish to take this opportunity of thanking my colleagues of the Council and the members of the association for their valued support to me during my term of office. I feel confident the same hearty support will be accorded to my successor.

Mr. E. M. Powers, in proposing a vote of thanks to our retiring president for his valedictory address, said:—It is one of the items to which we all look forward with very great pleasure, except perhpas to the retiring president. Our president has on this occasion given us a brief survey in a few eloquent words, touching on one or two matters which are of vital importance to architects, not only in the Transvaal, but in the whole of South Africa, particularly, of course, with regard to the Registration Bill. I recently had the pleasure of discussing our draft Bill with the secretary of the Royal Institute of British Architects and the secretary of the Society of Architects in London, and I was gratified to find how very keenly interested these two bodies were in our Transvaal Association. It was suggested at that interview that the Transvaal Association should take steps to become allied with the R.I.B.A. in London. With regard to our journal, *Building*, I

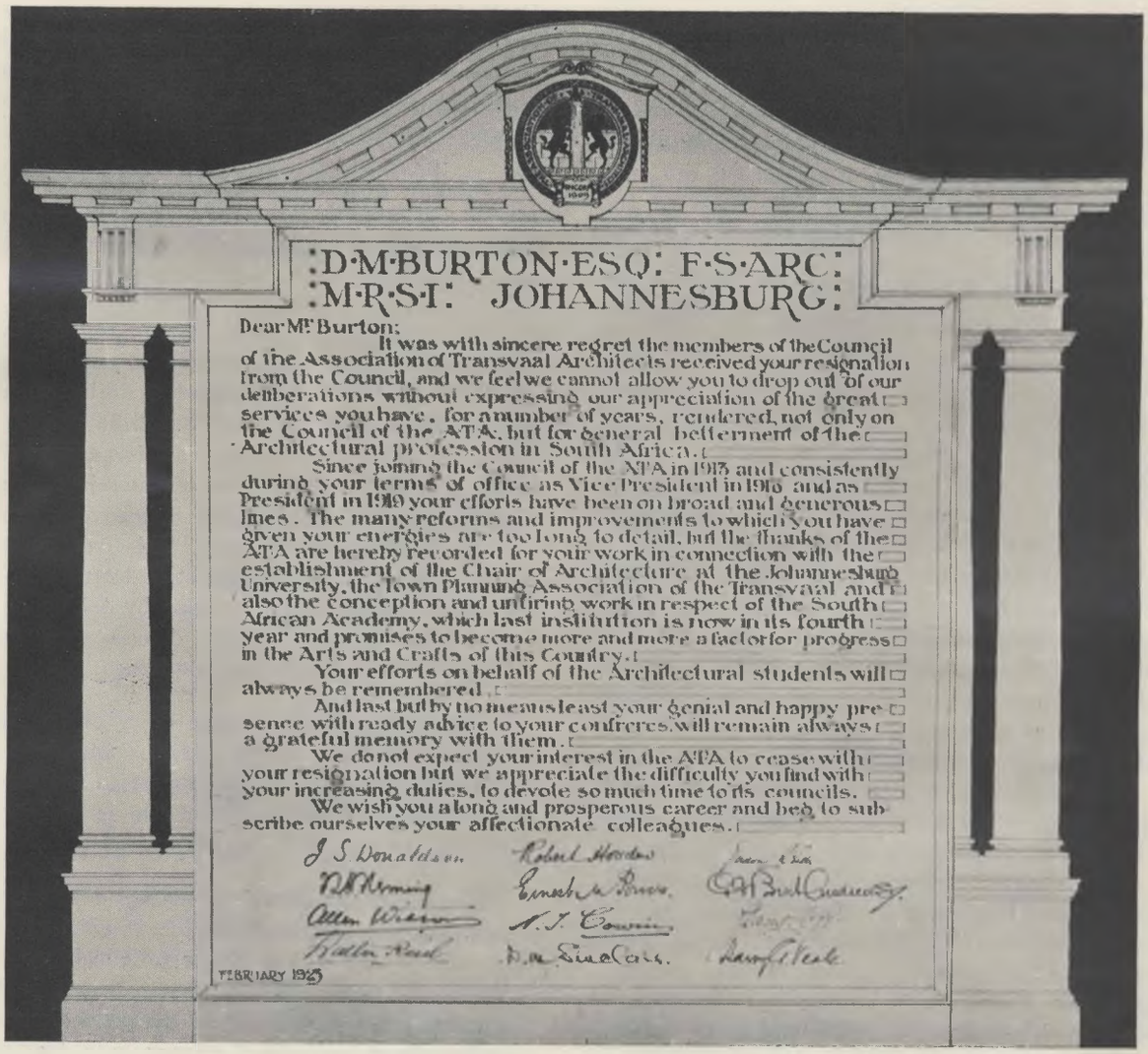
found that it is received quarterly in London and filed away with other technical journels.

We were also greatly complimented on our architectural paper. Mr. Herbert Baker spoke most enthusiastically of the work which the Association had done, and particularly with regard to the journal. He said he looked forward every quarter to receiving it, and wished the Association every success.

This was passed with acclamation, and Mr. Donaldson briefly returned thanks.

SCRUTINEERS.—On the proposal of Mr. N. T. Cowin, Messrs. G. E. Pearse and Harold Porter were appointed scrutineers to conduct the Council ballot.

In connection with this, Mr. D. A. McCubbin was informed that the number of members present and



Illuminated Address presented to Mr. D. M. Burton at the Annual General Meeting of 27th February, 1923.

With regard to the Registration Bill, both the secretaries to whom I have referred asked that copies of the draft Act might be sent to them. They are very keenly interested in the Transvaal Association, and they hope to have an opportunity of reading and digesting the provisions we propose to embody in our Union Act. I thought it would be of interest to tell you of this. In conclusion, I want to take this opportunity of proposing a hearty vote of thanks to the president for his very inspiring address.

represented by proxy at the meeting was 38 per cent. of the total on the roll.

During the counting of the votes, the President stated he had a very pleasing duty to perform in asking Mr. D. M. Burton to accept a souvenier of his association with Council and as a memento of work done for the profession. This took the form of an illuminated address, which the President read out prior to presenting same.

Mr. D. M. Burton, who was accorded an ovation on accepting the address said:—

I am sure I do not know what to say. To express thanks seems to me to be the only thing I can do. I feel that whatever I have done in the past has been done because I have had with me the loyal support of a number of gentlemen who have been prepared to sacrifice much time and thought in the interests of the architectural profession. I am sure that this testimonial is more than I deserve. (Audience: No, no.) I feel that to say these kind things about myself takes me back to the early days of this Association, when I think those gentlemen who occupied the chair and worked on the Council laid the foundation stone of what is to-day the highest thought-of profession in this country, and the work that has been continued since those days by our predecessors in office from time to time has only been the result of the labours those gentlemen put into the work of this Asscociaton.

You, Mr. President, referred just now to the draft Act, and it took me back to the time when those gentlemen, in 1991-12, spent many hours in working out the details of what is to-day our draft Act with only a few modifications, so that to state that any one person has done more than another is not quite the case. Each one has played his part, and I feel has done it manifestly well, so that to express these kind thoughts seems to me, as I have said before, really more than I deserve.

I thank you, gentlemen, from the bottom of my heart for the very kind appreciation you have shown me, and notwithstanding the fact that I have been compelled to vacate my seat on the Council I trust at an early date I will be able to stand again for election. I can promise you, gentlemen, that if there is anything I can do in the interests of the Association of Transvaal Architects it will be done willingly and to the best of my ability.

Mr. Burton resumed his seat amid loud applause.

AUDITORS.—Mr. Allen Wilson proposed that Messrs. Alex. Aiken & Carter be re-appointed auditors for the current year, and that their remuneration for the past year's audit be twelve guineas.

This was seconded by Mr. D. M. Sinclair, and unanimously agreed to.

PARK STATION.—Mr. D. A. McCubbin again introduced the question of the report made by the Council of this Association on the proposed design for Park Station, and wished to know if the line of criticism given in that instance had been followed in respect of a building now under course of erection and one to be started almost immediately, both in the centre of Johannesburg.

Mr. E. M. Powers, in reply, stated that the action of Council in respect of the proposed design for Park Station was at the invitation of the Mayor of Johannesburg; respecting the two buildings mentioned by Mr. McCubbin, these were privately owned, and the Council had not been approached in respect of either of them, therefore no criticism had been made.

Mr. D. A. McCubbin also referred to the publication of a letter in the December issue of the journal having reference to the profession of Quantity Surveying, and the inclusion of a chapter for the registration of quantity surveyors in the proposed Act, deprecating the tone of the communication, and giving as his opinion that it should not have been published.

The President stated that the matter would be brought to the notice of the Journal Committee.

SOUTH AFRICAN ACADEMY.—Mr. D. M. Burton, in referring to the forthcoming annual exhibition of the South African Academy, asked for the generous support of members by the submission of designs and paintings. In so doing he referred to the generous action of the Johannesburg Town Council who have passed a grant of money sufficient to cover the hire of the Selborne Hall for seventeen days in May next. Notwithstanding this donation, other expenses would have to be incurred, and he trusted that members would do everything in their power to make the exhibition a success, both by submitting exhibits and by interesting their friends to the extent of visiting the exhibition.

Mr. D. M. Sinclair proposed a special vote of thanks to the Mayor and members of the Johannesburg Town Council for their generous donation towards the expenses of the Academy.

Mr. F. L. H. Fleming, in seconding the motion, stated that it would have been impossible to carry on the Academy without the generous support accorded to it by the Town Council, and that it was a source of great congratulation to members as citizens to feel that the Municipal Council recognise the value of this movement and encourage it in order to pave the way for an appreciation of works of art by the rising generation. Mr. Fleming further supported Mr. Burton in asking architects to support the exhibition in order to make it what it was primarily intended to be—an exhibition of all the arts; to demonstrate to the public what is going on in the architectural profession as well as in other channels of art.

The motion was unanimously agreed to.

ELECTION OF PRESIDENT AND COUNCILLORS.—Mr. J. S. Donaldson called upon the Registrar to read the result of the ballot submitted by the scrutineers, Messrs. G. E. Pearse and Harold Porter:—President, Mr. F. L. H. Fleming; Vice-Presidents, Messrs. Allen

Wilson and G. S. Burt Andrews; members of Council, Messrs. N. T. Cowin, J. S. Donaldson, R. Howden, Gordon Leith, E. M. Powers, Walter Reid, D. M. Sinclair, F. Soff and H. G. Veale, the names being given in alphabetical order and not according to the votes cast in their favour.

The retiring President, in declaring the foregoing members duly elected to Council for the current year, congratulated Mr. Fleming upon his election as president, and vacated the chair in favour of the new president, who was greeted with loud applause.

Mr. F. L. H. Fleming, on taking the presidential chair, said:—I am extremely grateful to you for the great honour you have paid me. It is to my mind the greatest honour that this Association, so far, has power of conveying to anyone.

At the close of his acknowledgments, Mr. Fleming, turning to Mr. Donaldson, said:—

I have a very pleasant duty to perform before we depart for the evening, and that is to ask you to accept from the Association this photograph of yourself, and to allow us to include a copy of the photograph amongst the honourable show that we have of past-presidents. I think all the members of the Association will agree that it is a very good and faithful representation of our late president, although it does not represent him perhaps quite in the cheerful and happy mood in which we see him to-night. I think, however, it is really a good likeness, which we shall be extremely glad to have on our walls.

Mr. Donaldson, in expressing thanks for the photograph, stated he would be very pleased to allow it to hang on the walls of the Association alongside previous presidents.

Mr. Allen Wilson and Mr. G. S. Burt Andrews returned thanks for the honour of being elected vice-presidents of the Association.

On the motion of Mr. D. M. Sinclair, a hearty vote of thanks was accorded to Messrs. Donaldson, Fleming and Wilson for the services rendered by them to the Association during their period of office.

Mr. D. A. McCubbin moved a hearty vote of thanks to the retiring Council for the work they had done, and trusted that their efforts during the coming year would have successful results.

Mr. G. S. Burt Andrews said:—I do not think we can conclude this meeting without some recognition of the work carried out by our registrar. I do not think any one can be on the Council of this Association for any length of time without realising the enormous amount of interest in and work he does for this Association. He appears to be never tiring in his efforts to carry out the wishes of the Association. I think it would be very difficult indeed to find anyone more conscientious than our registrar in carrying out the duties of his office.

Mr. J. S. Donaldson, in associating himself with these remarks, stated that the registrar had been of great assistance during his term of office. (Loud applause.)

This terminated the thirteenth annual general meeting.

Minutes of Special General Meeting of Members, held in the Scientific and Technical Club, 100, Fox Street, Johannesburg, on Tuesday, 27th February, 1923, at 9 p.m.

PRESENT.—The President (Mr. John S. Donaldson) in the chair, Messrs. F. L. H. Fleming, Allen Wilson (Vice-president), G. S. Burt Andrews, N. T. Cowin, R. Howden, Gordon Leith, E. M. Powers, D. M. Sinclair, H. G. Veale (Members of Council), B. R. Avery, G. Bromilow, D. M. Burton, A. H. Gibbs, S. Gotzsche, M. J. Harris, Chas. Hosking, J. Cameron Kerr, Arthur Leitch, D. A. McCubbin, C. d'o Mainon, J. A. Moffat, S. V. Mann, W. B. T. Newham, G. E. Pearse, Harold Porter, John W. Small, Harold W. Spicer, F. Williamson, and the Registrar (Murray K. Carpenter).

Twenty-four members were represented by proxy.

Apologies for non-attendance were received from Mr. Walter Reid and Mr. F. Soff.

After the Registrar had read the notice convening the meeting, the President stated that it was properly constituted and competent to deal with the proposed amendments to by-laws, and explained that the business was to consider and, if approved, to adopt certain amendments to by-laws, with or without further amendments, the first dealing with:—

SUBSCRIPTIONS.

To add to By-law 29 (*b*) as follows:—

After the word "year" on the second line insert: "but members shall be allowed until the 31st of March in each year for payment of their subscriptions for that year."

Mr. D. M. Sinclair explained that the proposed amendment, which was the outcome of a suggestion put forward at the last annual meeting, would, if adopted, enable members who had paid their subscriptions up to the preceding 31st December to attend and vote at the annual general meeting following such date.

Mr. Cowin stated that the adoption of this amendment would upset the financial arrangement and would doubtless embarrass the Council in the early part of the year.

The Registrar stated that at the last meeting of Council a resolution was passed, to be communicated to this meeting, to the effect that Council had considered the proposed amendment, and could not see their way to recommend its adoption, because it would seriously upset the financial arrangement of the Association in the early part of the year.

In order to test the feeling of the meeting, Mr. D. M. Sinclair proposed, and Mr. Allen Wilson seconded, the adoption of the proposed amendment. On being put to the meeting, not one single vote was recorded in its favour, whereas practically the whole of the members present recorded their vote against its adoption.

The proposed addition to By-law 29 (*b*) was therefore vetoed.

RESIGNATION BY MEMBERS.

To add to By-law 30 as Clause 30 (*b*) as follows:

> "If any member of the Association should be absent from the Union of South Africa for a period of twelve consecutive months, and the Council be unable to ascertain his address, after careful inquiry, or if the Council, being aware of his address, should not receive payment of his arrear subscriptions within six calendar months in response to a registered letter addressed to such member requiring payment thereof, or if the Council should not receive within six calendar months in response to a registered letter addressed to such member, a definite declaration from him that he intends to continue as a member of the Association, the Council shall be entitled to treat such member as having resigned, and thereupon his name shall be removed from the register, and he shall cease to be registered as an architect and cease to be a member of the Association."

Mr. E. M. Powers, in proposing the adoption of the foregoing addition, stated that its object was to remove from the roll the names of some thirteen members whose whereabouts had not been known for more than ten years past; the retention of the names of these members on the roll presented a quorum difficulty which the Under Secretary for the Interior had advised could be overcome in the way proposed. Mr. Powers further stated that should any of the members whose names might be removed under this proposed amendment return at a future date the present By-law 31 provided for their reinstatement.

Mr. G. S. Burt Andrews, in seconding the motion, drew attention to a further obligation which would be removed by the adoption of this new by-law, inasmuch as it would reduce the Association's liability to the Associated Scientific and Technical Societies under the yearly membership payment.

On being put to the vote, the proposed addition to By-law 30 as 30 (*b*) was unanimously agreed to.

Mr. F. H. Fleming: The object of the proposed amendment to the By-law 47 is to assist the Council in giving effect to the provisions of the Act in respect of the qualification of applicants for registration. The Act has it that an applicant, having passed certain examination, must in addition have had at least four years' professional and practical experience as assistant to an architect.

Then came the question: "What is an assistant to an architect?" and the question was brought up in this way:—

When the degree and diploma course was being initiated at the University, there were students who proposed to take that course. On looking at the provisions of the Act they asked how they stood—if they were to take a full course for four years at the University, what was their position at the end of that time? Were they then to enter an office and serve a further four years as an actual assistant in order to qualify for registration? As pointed out by these students, it might be possible for a boy to enter an architect's office, to assist him, and at the end of four years to claim that he had been an actual assistant to the architect for four years, and, having passed the qualifying examination, he might claim registration.

This, these students felt, was unfair to them. The Council realised that, and this proposed amendment to the by-law was then drafted. In future no youngster upon entering an office will be able to reckon himself within the meaning of the Act a practical assistant to an architect. After two years he begins to qualify under the Act as an assistant and as having professional and practical experience. At the same time the full-time day students at the University are credited with half the time they put in at the University, not exceeding two years in all. At the end of those years the student must enter an architect's office and serve a further two years actually as assistant.

Another question was: "What is the position of a man who has left an office to act as clerk of works, practically supervising the erection of building?" The Council consider this good training, and as coming within the meaning of assistant to an architect. The proposed amendment suggests that a man may qualify to the extent of one year in all out of those four years required by the Act, if he has put in that time as a regularly appointed clerk of works.

Mr. Fleming then formally moved the amendment, with slight clerical alteration to the lettering of

paragraphs, as suggested by the Association's legal adviser, as follows:—

QUALIFICATIONS FOR REGISTRATION UNDER SECTION 7 OF THE ACT.

To add to By-law 47 as Clause 47 (*b*) as follows:

(*B*) "The expression 'assistant' contained in Section 7 (*a*) of the Act, shall mean a person who, having had not less than two years' preliminary and probationary experience as a pupil or junior, is competent to assist and in full time employment does competently assist an architect in architectural work.

"Provided always that (*a*) a whole-time student, having entered upon and regularly and diligently studied under the Degree or Diploma Course in Architecture provided by the University of the Witwatersrand, and having been during the whole of such period of study attached to the office of an architect for spare time and vacation time study, and having obtained thereby professional and practical experience, may upon completing such period of study be recognised by the Council as an assistant within the meaning of the Act, of standing equivalent in point of time to one half of such period of study not exceeding two years in all.

(*b*) "A person duly appointed clerk of works under an architect and engaged in practical supervision of works may be recognised by the Council as an assistant under the meaning of the Act for the period of such engagement or engagements not exceeding one year in all."

This was seconded by Mr. Gordon Leith, who remarked that it would be advisable to consider the compelling of students to undertake a period as clerk of works as an essential to their training.

On being put to the vote, the proposed addition to By-law 47, with Mr. F. L. H. Fleming's amendments thereto, was unanimously agreed to.

UNPROFESSIONAL CONDUCT.

To cancel present By-law, Clause 51 (*f*) and substitute:—

(*f*) "Advertising by members in any publication or in any way than by card, name-plate, stationery, office windows, site-boards, or foundation stones, the placing of names on hoardings and site-boards in letters exceeding six inches in depth, and on buildings and foundation stones in letters exceeding two inches in depth; the publication of articles and similar form of publicity without previously submitting them for and obtaining the approval and sanction of the Council."

The adoption of the above Clause 51 (*f*) was proposed by Mr. J. S. Donaldson, and seconded by Mr. Allen Wilson.

Mr. M. J. Harris opposed the clause on the grounds of its unfortunate wording and from the standpoint that circumstances had materially altered, and that inasmuch as the whole trend of modern thought in these matters was that the more personal you make your art the greater the public interest in that art. Mr. Harris thereupon proposed the following amendment:—

"Advertising by members by the placing of names on hoardings and site boards in letters exceeding six inches in depth; the publication of articles and similar forms of publicity without previously submitting them for and obtaining the approval and sanction of the Council; provided always that publication by card, name-plate, stationery, upon office windows or upon site boards or foundation stones within the limits before prescribed shall not be deemed as advertising within the meaning of this by-law."

This was seconded by Mr. D. M. Sinclair, and on a show of hands duly agreed to. Mr. Harris' amendment thus carried was then put as the substantive motion.

Mr. D. A. McCubbin moved a further amendment by the deletion of the following:—

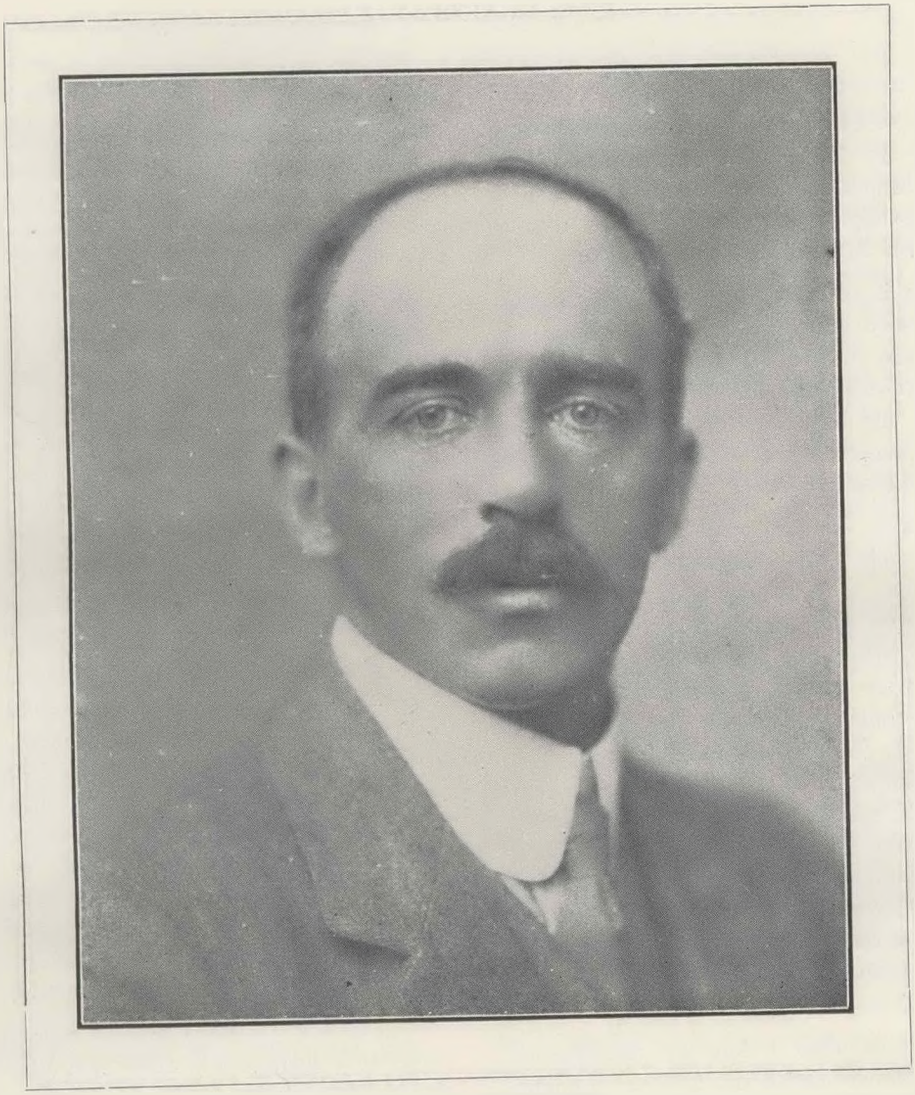
"The publication of articles and similar forms of publicity without previously submitting them for and obtaining the approval and sanction of the Council."

This was seconded by Mr. Gordon Leith, and on being put to the meeting was carried by a big majority, only one person voting against it. The by-law as thus amended was then put forward as the substantive motion and agreed to without dissent, reading as follows in its final form:—

"Advertising by members by the placing of names on hoardings and site boards in letters exceeding six inches in depth; provided always that publication by card, name-plate, stationery, upon office windows, or upon site boards or foundation stones within the limits before prescribed shall not be deemed as advertising within the meaning of this by-law."

This terminated the business of the special general meeting.

OUR PRESIDENT.



Mr. F. L. H. FLEMING.

Mr. F. L. H. Fleming, who has been elected president of the Association for the current year, was born at Southsea, England, in 1875, and educated at Denstone College, Staffordshire. He served his articles with Messrs. Beazley & Burrows, of Westminster, and afterwards worked for some years in London with Messrs. Marshall & Vickers, and Mr. Fitzroy Doll, and finally commenced practice on his own account in Kent.

Mr. Fleming arrived in South Africa in 1903, and in 1904 joined the office of Messrs. Herbert Baker, Masey & Sloper, in Johannesburg, and afterwards became a partner with Mr. Herbert Baker in the firm Herbert Baker & Fleming; from 1921 Mr. Fleming has practised in his own name.

Elected to the council of the Association in October, 1916, he has been a member ever since. In 1921 and 1922 he was elected vice-president. His keen interest in matters of art and education are well known by the stand taken by him at the annual general meeting of 1918, which resulted in the establishment of our Art and Education Committee.

Mr. Fleming was appointed Diocesan Surveyor to the Diocese of Pretoria in 1918, and is Diocesan Surveyor to the new Diocese of Johannesburg.

SUB UMBRA OPERUM MAGNORUM.

By G. W. NICOLAY, F.S.Arch.

Great changes which require much time to mature, often unobserved by those who act principally in making them, take place with a vigour and celerity which leaves a lasting impress, and in the realm of art run parallel with those of various civilizations.

The revolution in architecture, which is generally called the renaissance or revival of ancient art, may be said to have been due to the Italians, of whom a small party always remained faithful to the work of their forefathers. It has been noted in a previous number that in Rome works witnessing this were executed far into the middle ages.

To the Italians is also due what praise should be accorded for the study and enthusiasm which made the movement secure, to them also what praise is due for the passage from the conventional or symbolic painting to that of attempted realization, though the artists themselves were as well aware as any one that all artistic representation must be by the use of symbols either wholly confessed or partially concealed. The painted representation of an human face, placed beside the face itself, examined so to say anatomically, will discover this: the painted face is a collection of subtle symbols, lights, dots and dashes and glazings or washes of colour, which combined by focussing at the right distance, produce in effect partial realization of the original as seen or mentally evolved by the artist.

This transition was made before the introduction of oil as a medium which carried the new movement a stage further and established a sharp, even antagonistic change between what may be called modern as contrasted with mediaeval and ancient painting, so much in evidence during the early and central mediaeval times though much reduced in vigour produced a steadying influence upon the work which rapidly tended to simple imitation, and, in the hands of the majority of painters, became feeble, insipid and valueless.

The architect, for he was now very much in evidence, was still indeed an inventor, for even in adapting an old thing to a new use some invention is inevitable, but the whole art of Europe had fallen back into an experimental and imitating state which seems to reflect quite clearly the political and social conditions. There had been in times gone by a revival of a type of architecture which had become stagnant, if not entirely superseded. In Egypt, under the Ptolomies, considerable works were carried out in imitation of the ancient Egyptian temples. It is only interesting on that account, and compares very unfavourably with the ancient fabrics of that ever-attractive country. But this was short-lived and unproductive.

The revival in Europe of the Roman methods, for the Greek work seems not to have been affected by the architects or other artists, was quite different: Greek architecture did not form part of the schools, but Greek literature was a great factor in the changes which made that change between mediaeval and modern manners which fostered so greatly the new architecture. The Roman literature had the same effect. The stories of Christian heroes, which had been the literary food of the mediaevalist, had given place to that which had fed the ancient Greek and Roman and had exercised a disintegrating effect on thoughts and manners handed down through the middle ages.

Perhaps these were purposely used as levers to break down completely the declining modes and uses, and, as in the previous case, that of the Roman architecture and empire, a determined effort was made to get clear away from all persons and things mediaeval. That that was not successful was only due to the fact that no central cataclysm, such as the capture and sack of Rome, was possible. There was no world empire, and no capital of the world. The general condition of Europe was secure, no matter which of the various countries made war on each other.

The new methods worked peacefully amongst the various countries, and developed with great speed and perfect acceptance to the great and weathy men of the time.

The revived classic art was, so far as architecture was concerned, at first restrained even to severity, but the nature of much of the work offered for practical application of its methods prohibited its progress along the academic lines which seem to have been proposed. The accustomed arrangements of buildings, which were quite different from those of Rome and Greece, could not be brushed aside, and the modern Roman made to don the toga and sandals and other garments of his remote ancestor, or to adopt his habits of living. There was no demand for baths, where people could spend their idle hours or cultivate physical strength or grace, none for lectures or discussions on philosophy in their porticos, none for law courts of the basilicas, none for the temple, and these were the necessities upon which the Roman style was developed. But there was great attachment to the familiar arrangement of a church, of the castle, the palace and

traditional form of dwellings, and love and even reverence for their houses where families had lived for generations, and of which the building and extending as the family increased in importance by this or that extension was a cherished family tradition. The new aspirations of architects did not altogether fit in with these, and from this important results followed.

People were now beginning to desire more light in their houses. Governments were becoming centralized, and the petty wars between neighbours were growing out of date, and fortified houses ceasing to be built. The dwellings of the wealthy could not be destroyed, and so they were remodelled, and much irregular but very attractive work was in consequence done. And following this inevitable result the new style became mixed, and devices quite unknown to the ancients intruded upon the thoughts and wishes of the new school. The continuous arcade was frequent, which was common to the Byzantine, and mediaeval work continued in use and often handled with much grace, though the pompous examples, such as that in the hospital of the Certoza, at Pavia, with fluted Corinthian columns and capitals, though very magnificent, can hardly be considered satisfactory.

The spacious courts of fortified houses still formed the basis of the arrangement common to the palaces of princes and dwellings of the wealthy, and the cruciform plan still in favour for churches.

Viewed generally, although the school was confessedly an attempt to make the Roman architecture flourish again, all that was found possible was the partial fusion of mediaeval and modern architecture. No doubt the enthusiasts of the time stuck fast by the ancient examples; among them was found men who could give their time to that working out of what came to be called " the extreme (or exact) proportions of the five orders," a feat that has clipped the wings of many a promising designer, and if very closely attended to will clip the wings of many another. But the new school had to contend with a multitude of artists great and small who, though feeling the necessity to comply with the wishes of their patrons to fall in as much as was possible with the new manner, could not, even if they would, design Roman architecture. The spirit of it was not in them, and they did not, as was natural, leave the matter to the pedants.

As with former developments, the decorative arts came forward little affected by the change in ideas architectural. The Greeks teaching the Byzantine under the Roman rule, the Byzantines handing on through the dark ages to the mediaeval men. All the crafts—masons and carpenters, workers in iron, carvers in stone, wood and ivory, workers in mosaics and stained glass, with the sculptors and painters at their head, had all been accustomed to at all events freedom in their work. It was impossible that an army like that could be drilled into obedience to the new movements all at once, and that did not happen. But the painters and sculptors now had become the leaders and were soon to become for a short time the masters. Some of them being painter, sculptor and architect, and had perhaps thought to arrange their buildings so as to provide places for their own sculptures and wall spaces for their own paintings. Few, of course, were men enough for such a task, but their skill and vigour might excuse such a desire, and the desire seems to appear which enlisted that fervour and zeal with which the early renaissance movement was alive.

At first the painters adhered to the now passing manners of composition, and they developed power control of their light and shade, colour and of their materials and treatment of work not yet excelled, but they were quickly followed by men who had all these qualities, and added a freedom never before attempted and not then, nor perhaps ever likely to be, excelled. These were the men who, so to speak, led the storming party that rushed the new thoughts into every Court in Europe, thence to filter to the great, the less and the lowly.

Thus through two centuries the work went on successfully, then again conditions became unfavourable, the great men had gone to their rest, their successors had their freedom but not their power; all the arts languished and fell to a very low ebb, discredited and neglected, and a fallow time ensued.

Under the shadow of the great mediaeval buildings not in ruins and not likely to be, not only intact but in full use and with the social and religious customs and ceremonies not very much altered new architecture was unfolding its beauties and defects under the guidance of two ideals and two sets of artists, and both operated in different parts of Europe, producing different renderings of the work according to the characteristics of the people, just as had been the case in mediaeval times. On the one hand the rule, the strict order which could be safely undertaken by an indifferent artist was attractive; on the other, the free working of the now passing mode was held tenaciously and for a while there was work for both, but by the middle of the eighteenth century the number of considerable buildings erected was greatly diminished and the work had become debased in detail and all the minor arts had fallen on evil days, although following all precedents, individual good work was being done.

Two familiar and fine examples will show how strong was the influence of the mediaeval work upon the new movement. St. Peter's, at Rome, and St. Paul's, at London. St. Peter's was the successor of the great basilican church previously noticed, and the central position had on each side a long range of columns quite in the Roman manner, with the usual

entablature and inter-columniation; the plan was not what is generally considered cruciform. The body of the church consisted of a wide central aisle, with on each side of it two narrow aisles terminating in a transverse member equal in width to the central aisle, and in its centre an apse projecting just sufficiently to suggest the cross. In the plan of the new church the cross is more apparent, and although the external outline does not follow the lines of the central aisle and transept, it is reminiscent of a form not unusual in mediaeval work.

St. Paul's was the successor of an old mediaeval church. Its plan is more regular, more conservative —like the people it was built for, and the cross form is quite apparent, inside and out. The centre space in both churches is made the full width of the nave and aisles covered by a dome, a feature first used in a church at St. Sophia's, Constantinople, at a time when that church and old St. Peter's were building together, and not repeated on a grand scale until it was added in the cathedral at Florence, and became the ambition of all renaissance architects, and perhaps the most notable feaure of the style.

St. Peter's compromises internally between the old and the new, a quasi arcade with massive piers on the face of which pilasters of gigantic dimensions, forming with the entablature an order reaching the springing of its almost equally ponderous barrel vault.

The composition has something of heathen barbarism, intended to produce physical awe, like the columns at Karnac or the gigantic statues of Egypt or even Greece.

St. Paul's is more gracefully designed, its proportions more pleasing is vaulted bay by bay and has some of the spring and buoyance of a mediaeval church. These examples may perhaps be considered typical of works of the South and North among many other monumental works, and of the mixed state which governed the works of the time.

It is remarkable that with the magnificent and original remains of the baths of Caracalla before them, when designing St. Peter's, something more in the manner of the freedom of that great work was not attempted.

But new aspirations in such matters are seldom realized to the full or even to the extent achieved in this attempt to revive Roman work, which had it not been supported by the great painters of the sixteenth and seventeenth centuries and the craftsmen who succeeded the mediaeval workers and carried on their traditions, would have fallen far short of what this movement actually attained.

The Municipal Council of Bloemfontein have decided to erect new market buildings at a cost of approximately £30,000.

DOME AT PIET RETIEF.

In an article on vaulting, which appeared in a previous issue, Mr. Leith mentioned the above, and stated that according to "reliable" information given by me this building was put up by natives. But as is often the case with reliable information, though given in good faith, with further investigation it proved to be erroneous. This, however, does not rob the structure of its interest.

It was built some twenty-three years ago by an Italian named Crassy. The bricks used are bad and sandy, but the lime mortar is exceptionally good. The sand in Piet Retief, as I have had further opportunity to note, is of very special quality, and lime mortar gets as hard as cement.

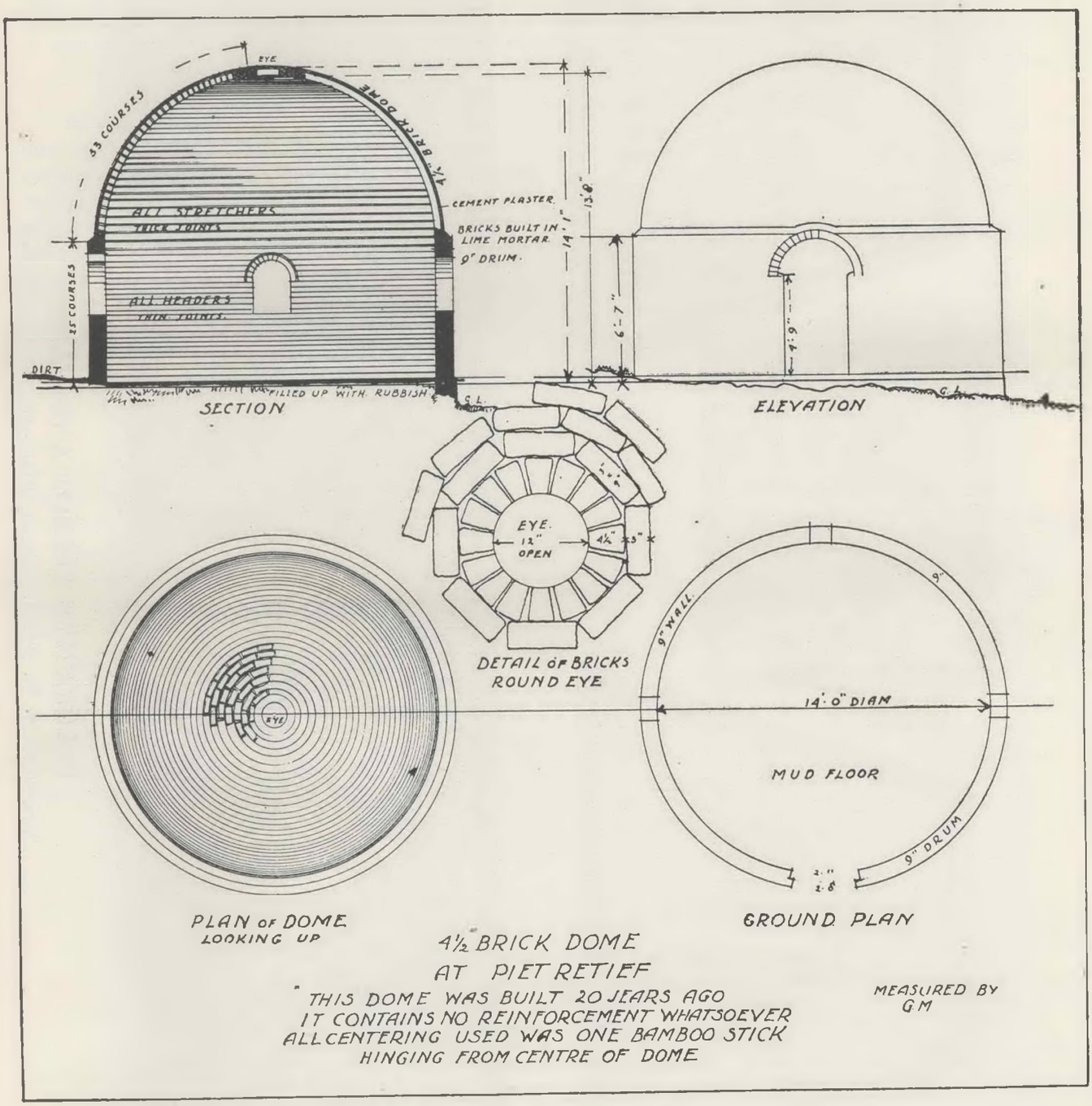
I have been told by eye witnesses that the dome was built without centering, a bamboo stick, fixed on a universal central pivot, was all the support used. There is certainly no reinforcement of any description.

A 14 feet dome built of 4½in. brick in lime mortar is something new. Few architects would have had the courage to allow its construction, yet this unpretentious hut has withstood the still and stormy waste of time for twenty-three years. There is not a sign of settlement or crack to be seen. I am told that Crassy put up these things for £25 each, including material.

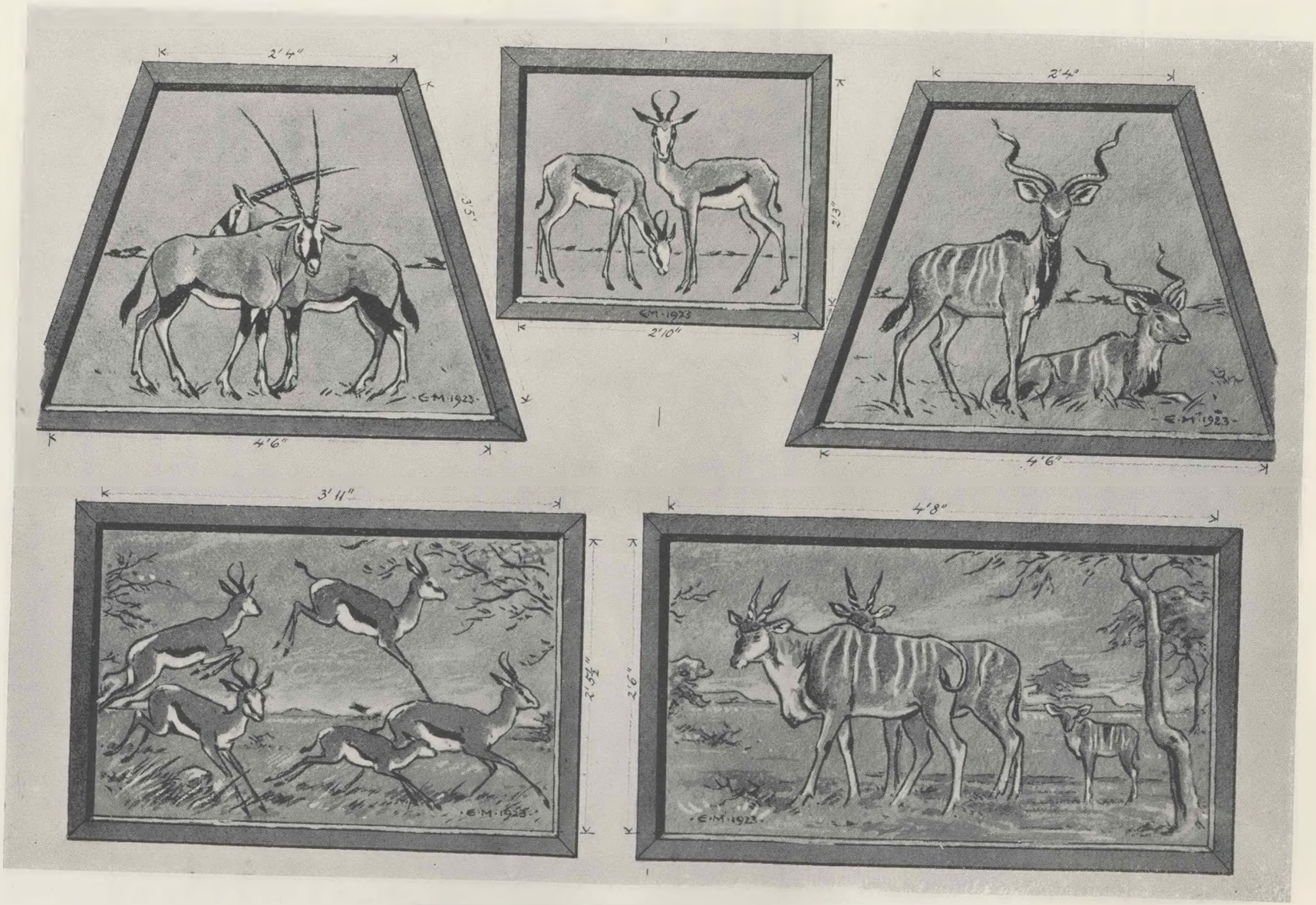
GERARD MOERDIJK.

Mr. A. Pease, A.R.I.B.A., of the Public Works Department, will assist Messrs. T. Gordon Ellis and V. S. Rees Poole in the conduct of the architectural classes in Pretoria during the coming year, and will specially lecture on building construction.

PLAN OF DOME AT PIET RETIEF.



Measured and Drawn by Gerard Moerdijk.



DECORATIVE FRESCO AND PANELS

Designed for H. W. SPICER, Architect, Johannesburg, by ERIC MAYER.

BARREL VAULTS.

A request has been made for a few notes on the strength of barrel vaults, which will bring to notice of our readers the arguments employed in the most comprehensive Kidder-Nolan Architects' and Builders' Handbook, 17th edition, New York, John Wiley & Sons, Inc. (1921), the subject matter of the section on vaulting calculations being written by Mr. Edward F. Ries, Consulting Engineer, Texas.

A SERIES OF ARCHES.

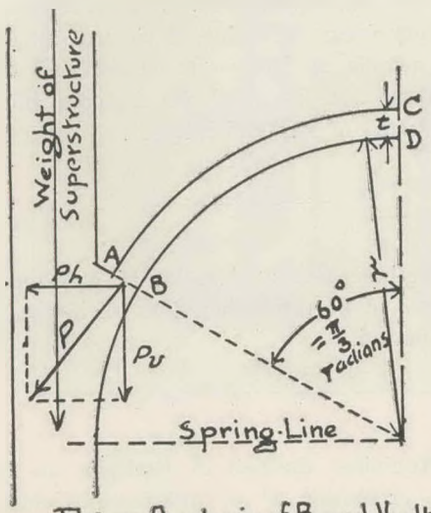
Barrel vaults are considered a series of arches set next to one another; so if strength of one such unit is determined as an arch, the remainder are considered to be identical. By building the wall and vault together, as shown in Fig. 1, to a point on the arc 60° from the crown or vertical, the actual span is materially decreased. With the spring-line at 60° the line of thrust in an unloaded arch or barrel vault of an equal thickness throughout will remain within a strip whose radial thickness is 1-42nd of the radius. If the line of thrust is to remain in the middle half, as shown in Fig. 2, then t (Fig. 1) should be

$$(\text{rod} \div 42) \times 2 = \text{rod} \div 21.$$

In the example given the theory of the middle half will be followed, in which t *i.e.*, the thickness of vault = rod ÷ 21.

(Note.—If middle third theory be followed, the span would be reduced by one-third, or the span of vault in Fig. 2 would be changed from 21 feet to 14 feet.)

The vault shell is taken to be unloaded. Now in Fig. 1 the vertical component Pv of thrust P is equal to the weight of the half of the free vault, viz., the section $A\ B\ C\ D$. The horizontal thrust is taken at 0·79 of the vertical component, and is not at right angles with the spring-line AB: that is, $Ph. = 0{\cdot}79P$.



— Fig. 1 Analysis of Barrel Vault. —

Example.—It is required to construct a barrel vault over corridor 21 feet wide. The vault radius is half this, viz., 10 feet 6 inches. (If of brick, it is cheaper to build a ribbed vault, assuming a half brick thickness at 4 inches only.)

On above rule, $\frac{10{\cdot}5}{21} = 0{\cdot}5\text{ft.} = 6$ inches. A vault 4 inches thick (*i.e.*, brick on edge towards the centre) with ribs at centres every 3 feet 3 inches (each rib being 4 inches projection and 8 inches wide) will equal a continuous vault of 6 inches thick. Brickwork is taken at 125lb. per cubic foot.

The *vertical component*, Pv, of the thrust is—

$$\frac{[\frac{1}{12} \times 3\tfrac{1}{4} \times \tfrac{1}{3}\pi \times 10{\cdot}5 \times 125] \times [\frac{1}{12} \times \frac{8}{12} \times \tfrac{1}{3}\pi(10{\cdot}5 + 0{\cdot}33) \times 125] =}{3\tfrac{1}{4}}$$

5,595 lb. per lin. ft.

The *horizontal component*, Ph, of the thrust is $0{\cdot}79 \times 5{,}595 = 4{,}420$lb. per lin. ft.

The supporting wall must be thick enough buttressed enough, or loaded sufficiently from above to take care of this horizontal component of the thrust. (The graphies of the thrusts after they leave the vault are not shown, being worked out in the usual manner, taking the weight and thickness of the wall into due account.)

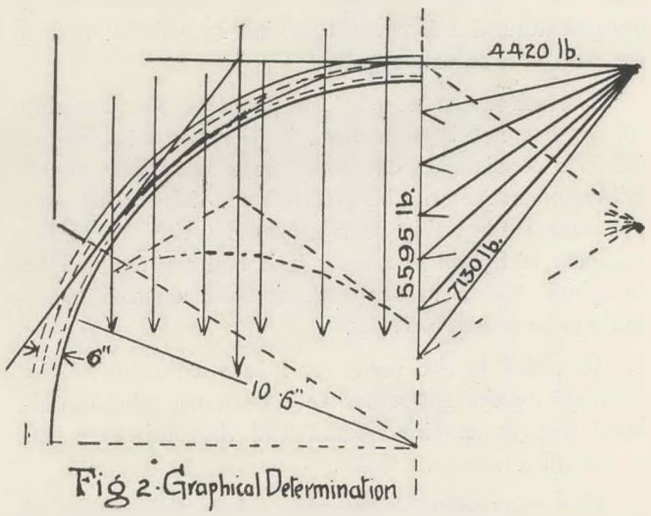


Fig 2. Graphical Determination

In the above Fig. 2 it will be observed that the line of pressure is in the *middle half* of the vault thickness. Scheffler, in "Theorie der Gewölbe," after numerous tests of vaults, stated that if one-fourth of the vault thickness is deducted at the extrados and one-fourth at the introdos, and if the line of pressure found according to the elastic theory of arches is confined to the remaining portion, that is, the *middle half*, then the vault may be considered safe. He is the more inclined to this belief from the fact that, unlike many arches, vaults are relatively protected from live or moving loads, and the writer, Mr. Ries, considers his conclusions are valid.

E. H. WAUGH.

SYNODICAL HALL, CAPETOWN.

As a memorial to the coming of the Hugenots to South Africa, in the year 1688, the Dutch Reformed Church of South Africa decided to build a Synodical Hall, and for this purpose called for competitive designs from South African architects. Mr. W. J. Delbridge, A.R.I.B.A., was appointed professional assessor, and out of the twenty designs submitted placed the following:—First, Messrs. Cowin, Powers & Ellis, of Johannesburg and Pretoria; second, Mr. M. Brink, of The Paarl; third, Messrs. Perry & Stocks, of Capetown.

We illustrate in this issue the first premiated design, which, with slight modifications, is being proceeded with. We also append the following excerpt from the report which accompanied this design:—

After consideration of various plans for the allocation of the accommodation desired, the authors have decided on the plan submitted by them as the best solution of the problem put before the competitors. In this scheme, the hall runs longitudinally almost south to north, with entrance from both streets, and is flanked on the Queen Victoria Street side by two three-storey blocks for the offices; the whole being grouped around a fore court, which is enclosed with a low wall and entrance gates.

The extension of the site towards the Training College has not been utilised in the present scheme, and it is considered that any future extensions of the buildings can suitably be placed here. Meanwhile this area serves admirably as a garden for the use of the members of Synod in recess; it is laid out as such on the plan, and a screen wall is built on the street frontage to ensure privacy.

Provision is also made for future extension of the buildings on the Keerom Street frontage, where additional storeys can be erected and the staircases can be extended to serve them.

The separation of the offices into two blocks of buildings is considered essential to the scheme so as to express and give due emphasis and dignity to the main entrance and facade of the hall; the offices do not suffer thereby as they are divided into groups and are not inter-dependent.

The fore court provided on the Queen Victoria Street frontage is considered an excellent feature, and ideal for the comfort and convenience, not only of the members of Synod, but of the numerous callers at the Mission offices. It provides a place of assembly and waiting, where members of Synod may enjoy a brief chat and smoke in the open air; and for the callers, the fore court provides waiting room which might otherwise have to be found on the pavement or street. This fore court, together with the entrance loggia to the hall, in reality serve as extensions of the vestry, and can well be counted as such in this country where ideal weather conditions prevail.

The four-feet passage on the west side is duplicated on the east side, and the two serve to provide additional light and ventilation for the main hall. Attention is drawn to the fact that these passages and the fore court enable all internal areas to be eliminated.

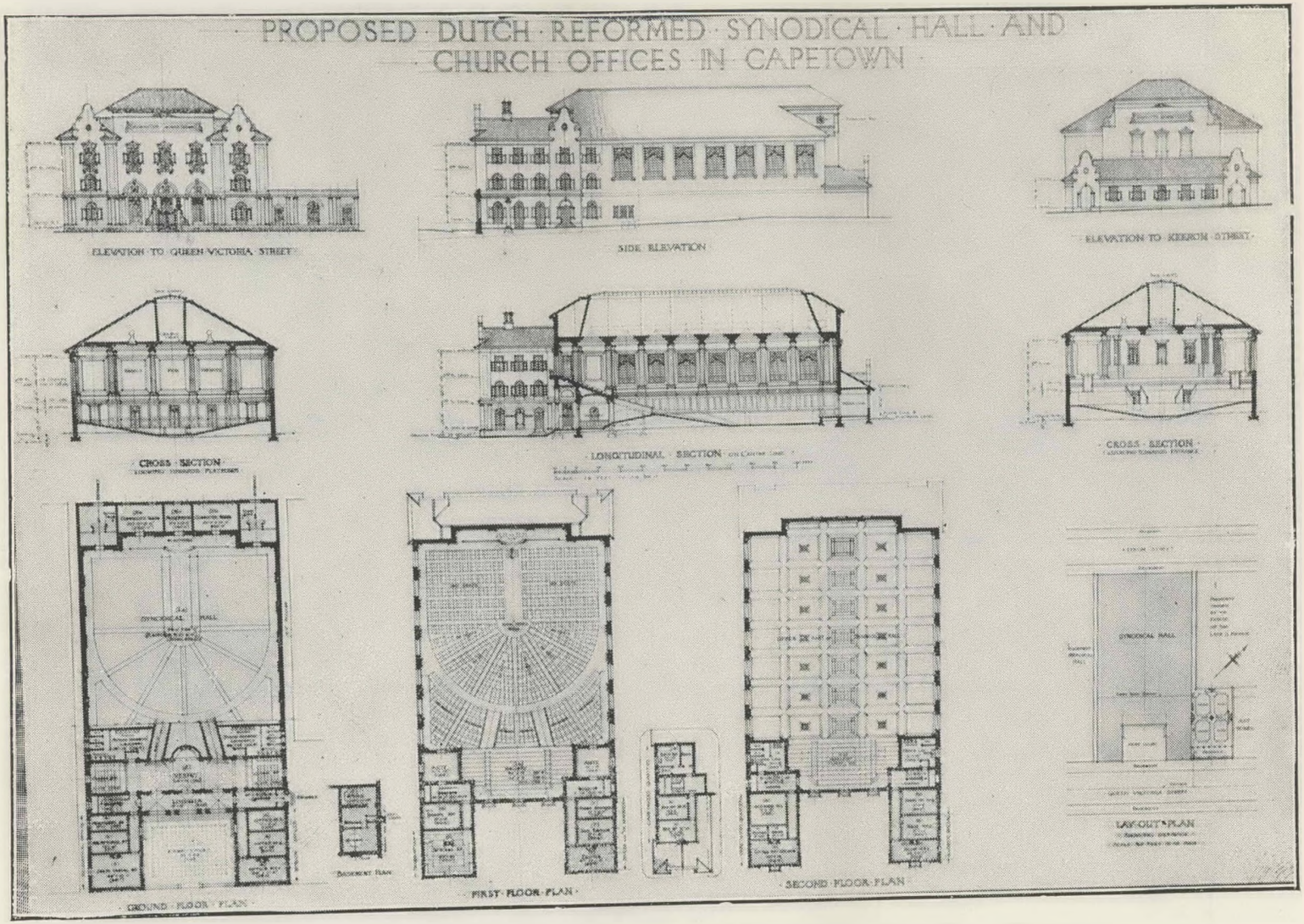
The number of staircases is reduced to a minimum; the staircases to the gallery of the hall serve the offices also.

The Synodical hall, which is the chief feature of the design, has been carefully considered in relation to convenience, accommodation and acoustics. It is well situated, accessible from both streets, well ventilated and well lighted. The acoustics should be well-nigh perfect, and to this end the hall is given a flat ceiling, which is treated with broad, deep ribs and coffered to prevent the sound from travelling along a focal line, and curved walls are eliminated as they exercise a focussing action and produce regions of undue intensification and of comparative silence, and are almost inevitably a menace to good acoustics. In addition to the large windows on each side of the hall flat lights are placed along the centre of the ceiling, with roof lights above them so that ample daylight is provided; and it is well to note that the lighting of the hall may be made independent of the windows. The interior of the hall is broad and spacious, wholly without columns or other supports to obstruct the view. The seating is planned on the principle adopted in the best modern theatres and concert halls; the floor sloping upwards towards the back of the hall and the seats being arranged fan-wise every member of the Synod has a clear and uninterrupted view of the platform, and except in a few cases may leave his seat without disturbing anyone else. A level floor is always unsatisfactory from the point of view of an auditory. The large panels on the walls of the hall over the platform may well be used for frescoes illustrating historical events of national interest.

Mr. Herbert Baker, A.R.A., in a letter to Mr. Waugh, asks to be remembered to all his old friends in the Transvaal.

* * *

The Municipal Council of Brakpan are contemplating the promotion of an architectural competition for designs for new public offices for that municipality.



FIRST PREMIATED DESIGN.—Cowin, Powers & Ellis, F. & A.R.I.B.A., Johannesburg and Pretoria.

THE CAPETOWN CONFERENCE.

JANUARY, 1923.

G. T. Hurst
H. de la Cornillere
W. A. Ritchie Fallon
F. K. Kendall
H. Norman

M. K. Carpenter

W. J. Delbridge

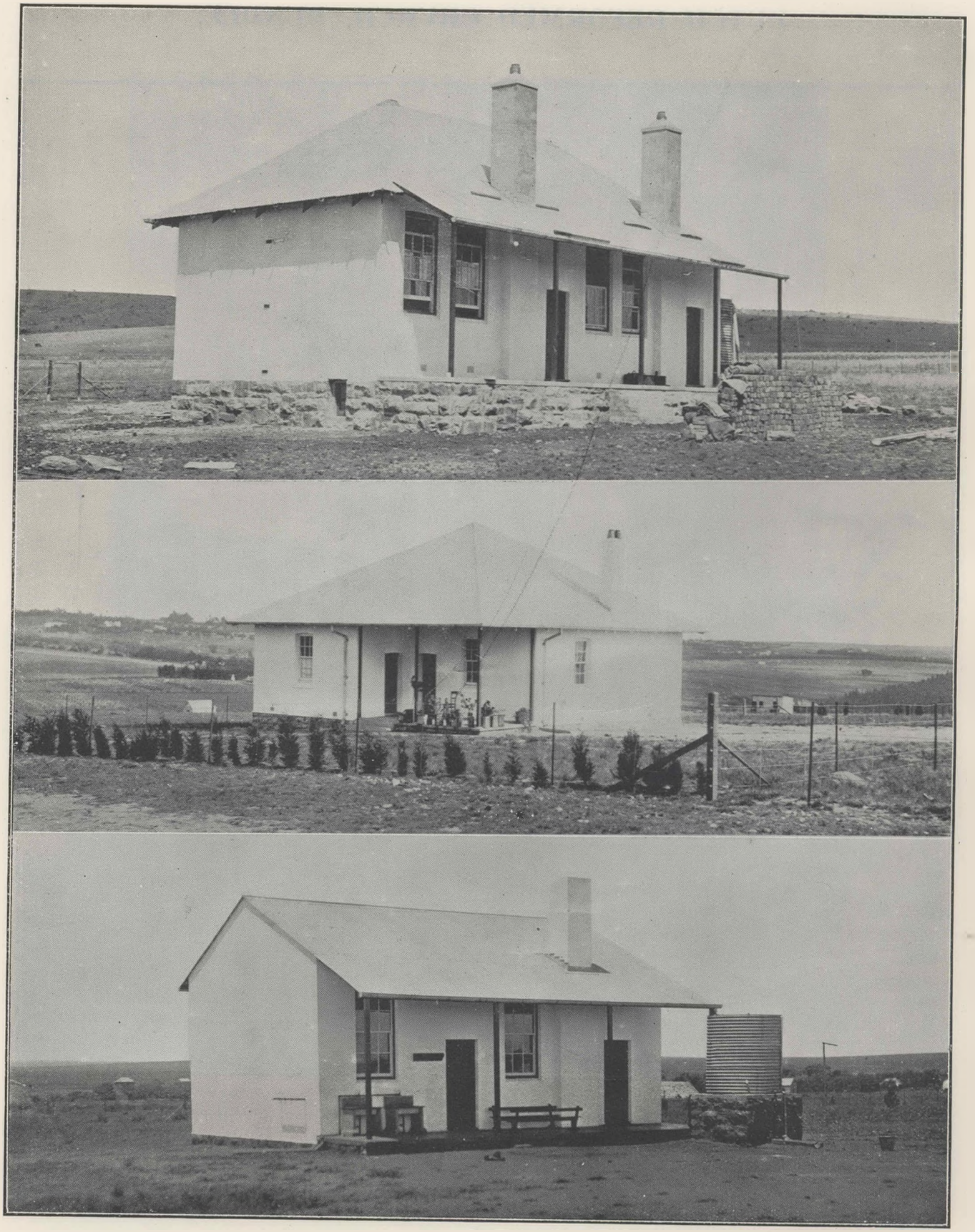
E. Austin Cooke
N. T. Cowin
Allen Wilson
M. J. Harris
John Perry
F. Hesse

DUTCH REFORMED CHURCH, DUNDEE.

Gerard Moerdijk, Architect.

EDUCATIONAL BUILDINGS FOR THE VELDT.

Designed and Erected by the Public Works Department.



1. New Thorndale School,' view from North East. 2. Teachers' Quarters, Bramley. 3. School at Holfontein No. 35.

SIR CHRISTOPHER WREN.

A Paper read by Professor G. E. Pearce, A.R.I.B.A., at the Associated Scientific and Technical Club, Johannesburg, on 10th March, 1923.

Last week, in England and America, the bi-centenary of the death of Sir Christopher Wren, England's greatest architect, was commemorated.

Those of you who know London well are acquainted with his greatest achievements—the colonnades of Greenwich, the spires and towers of the city, the dome of St. Paul's, Chelsea Hospital, Hampton Court Palace. He it was who set a standard in English domestic architecture unrivalled to this day. The influence of his work is seen in the stern street architecture of Bloomsbury and Portman Square, in an austerity which concentrated ornament on porches and fanlights, and in the severe sash windows as best adapted to England's capricious climate. Had it not been for the genius of Christopher Wren, later Renaissance architecture might have remained an exotic in England, since Inigo Jones never succeeded in acclimatising classical architecture. The far-reaching influence of his work is seen, too, in the charming homes and churches of the early American colonies, and in the work of many of our leading architects to-day.

Sir Christopher Wren, born 1632, was the second son of Christopher Wren, Rector of East Knoyle, Wiltshire. His early days were spent at Windsor Castle, where his father was appointed Dean and Registrar of the Garter, when Wren was four years old. There is little personal record of these early days, the chief source of information for the biographers of Sir Christopher Wren being the carelessly compiled record known as "Parentalia," collected by his son and published by his grandson, Stephen Wren. In it it is stated that his first education in classical learning was, by reason of tender health, committed to the care of a domestic tutor, the Rev. William Shepheard, until such time as he should go to Westminster, which was not until he had passed what was then considered the mature age of nine. In 1641 he, small in stature, but having apparently outgrown much of his early delicacy, was entered at Westminster School, then under the rule of that uncompromising Royalist, Dr. Richard Busby. Of his achievements at Westminster there is little detailed record, but he displayed remarkable ability, and had already shown his natural bent for invention by making an astronomical instrument which is stated to have been in general use. There is an interval of three years between his leaving Westminster and going up to Oxford, during which time disaster after disaster befel the Royalists, culminating in the King's death in 1649. Wren appears to have remained in London with Sir Charles Scarborough, an eminent physician recently ejected from his fellowship at Caius College on account of his loyalty.

Mathematics in those days were not part of the regular academic curriculum, but Scarborough devoted much time at Cambridge to that branch of learning with Seth Ward, afterwards Bishop of Salisbury, as fellow student. Wren appears to have occupied the position of assistant, especially in the preparation and dissection of anatomical specimens, and states in a letter to his father:—"The famous physician does not disdain to submit those mathematical studies in which he has so distinguished himself to what I will not call my judgment, but rather my taste, so that he even lends an ear to my opinions, and often defers to my poor reasonings, while, in my turn, I impart to him anything of merit which I have lit upon, or which I owe to you in organics or mechanics."

At this time Wren first met Dr. John Wilkins, Chaplain to the Elector Palatine, noted for his skill in mathematics. Wilkins, struck by young Wren's attainments, introduced him to the Prince, who had known the family intimately at Windsor. Wilkins and Wren, with a number of others interested in scientific research, used to meet weekly in London, and from these informal assemblies sprung the now famous Royal Society, which I shall mention later.

In 1649 Wren was entered as Gentleman-Commoner at Wadham College, Oxford, where in 1648 Wilkins had been appointed Warden by Parliament. In all save politics, Wilkins must have been a preceptor after the boy's own heart, of all men then in Oxford the best able to concentrate his pupil's intellectual effort in science. Among the scanty information available, there is not a hint or suggestion of his leaning towards art at this period, for he appears to have busied himself chiefly with ingenious time-saving instruments, weather clocks, astronomy and mechanics.

John Evelyn in his diary, July, 1694, refers to a visit to Wadham where he met that miracle of a youth, Mr. Christopher Wren, nephew of the Bishop of Ely, and again when he dined with Dr. Wilkins, "who showed him a number of inventions, most of them of his own and that prodigious scholar, Mr. Wren," who had recently been made Fellow of All Souls.

In 1657, Wren, at the age of 24, was offered the Chair of Astronomy at Gresham College, London, but he declined the honour on account of his youth, and also because his share in the researches of the Philosophical Society at Oxford made him unwilling to leave All Souls. His friends, however, prevailed on him to accept the appointment. His inaugural address, delivered in Latin, makes one regret that so few of his writings have come down to us. Wren, at this time, perfected the barometer invented by Torricelli, and

Sir Christopher Wren.

completed by Pascal, with such success, that he has been accounted by many the inventor. In 1658, Pascal, the famous French scholar, challenged the mathematicians of England to answer a problem by a certain day, for which a large prize was offered. Wren solved the problem and set another, which seems never to have been solved. In 1660 he was able to resume his work at Gresham, which had been held up owing to the college being used as a barracks. On November 20th, 1660, in Wren's rooms, it was decided to found a Philosophical Society for the promotion of physico-mathematical experimental learning on the lines of the informal meetings in London and Oxord. In 1661 Wren resigned his Gresham College Professorship for the Savilian Chair of Astronomy at Oxford, which his friend Seth Ward had just vacated on being appointed to the See of Salisbury.

In the catalogue of the Museum of the Royal Society, Wren is mentioned as having "composed a lunar globe representing not only the spots and various degrees of whiteness upon the surface, but the hills, eminences and cavities, moulded in solid work." The fame of this model reached the King's ear, and resulted in a royal command to perfect the design and make a globe "representing accurately the figure of the moon as the best tube represented." Shortly after this Wren, when not yet thirty, was created Doctor of Laws, Cambridge conferring the like honour upon him shortly after.

In 1662, Isaac Barrow was appointed to the Geometrical Chair at Gresham, and in his inaugural address spoke in glowing terms of Wren. But it is not in direct eulogies spoken or printed that we find the strongest evidence of the high esteem in which Wren's parts were held by his contemporaries, but rather in the way in which, when aything had to be done demanding special judgment and promptness, they had recourse to his aid, even when the matter lay outside the usual scope of his varied attainments. When, for instance, the royal consent being required for a charter to the society, it is Wren, one of the youngest members, and not by calling a writer, who is depicted to the task.

The year 1662 may in some sort be accounted the turning point of his career, for then it was that Charles II. began that series of royal favours which turned Wren's thoughts definitely towards architecture. Part of the Queen's dowry was the town of Tanjiers, of which the harbour and fortifications were in a ruinous state. The King offered every inducement should Wren consent to go out, survey and report. Wren, however, declined on account of his health. The King therefore made him Assistant to the Surveyor-General, Sir John Denham, described by Evelyn as "more of a poet than an architect." Scarcely had Wren entered upon his new duties when two architectural commissions were given him in his private capacity, and he was also invited by the Dean and Chapter of St. Paul's to survey the cathedral, which was in a deplorable condition.

The first of these commissions was the Sheldonian Theatre, Oxford. In April, 1663, Wren had prepared a model, the building, however, not being completed until 1669. This building is chiefly interesting as showing his skill in structural mechanics, the roof with flat ceiling having a span of 68 feet.

His uncle, the Bishop of Ely, who had called upon him to design a doorway and lobby at Ely, desired him to prepare plans for a Memorial Chapel at Pembroke College, Cambridge. This was completed

in 1665, and may be considered his first architectural work of importance. The chapel has been lengthened since then, but the western end remains the same. The principal feature is the great engaged order of Corinthian pilasters, the capitals bearing the arms of the college. Just behind the pediment rises the hexagonal domed belfry of florid design. In this building Wren displays that mixture of classical convention with geniality which distinguishes him.

There is an entry in Evelyn's diary at this time which is interesting. It records the presentation to the Vice-Chancellor of Oxford, of Evelyn's recently published translation of a famous French treatise on architecture, by Roland Freart, who had been commissioned by Mazarinn to collect works of art in Italy for the adornment of the royal palaces. The book deals with the works of the leading architects of the Italian Renaissance, and it is more than likely that Evelyn presented a copy of his work to Wren, for whom he had a great admiration. Wren, in a letter written from Paris later on, refers to having read this book, and also Serlio's d'Architettura, these being the only books of which he has recorded his knowledge. It is quite likely, too, that Inigo Jones' work had made an impression upon him.

In 1664, during the Great Plague, Wren gladly availed himself of the opportunity afforded him by an introduction to the British Ambassador in Paris, of visiting the French capital. Though he went as an astronomer, he returned as an architect. At this time there was a great deal of architectural activity in France. Domed churches were being erected, prompted no doubt by the fame of St. Peter's Rome, and these domes, the only ones Wren ever saw, must strongly have influenced him. Lord St. Albans, a special favourite of Queen Henrietta, introduced him to the society of architects, sculptors and painters who thronged the Court of that great patron of the arts, Louis XIV. In a letter to Dr. Bateman, who introduced him to the Ambassador, Wren says:—"I have busied myself in surveying the most esteemed fabricks of Paris and the country round: the Louvre for a while was my daily object, where no less than a thousand hands are constantly employed on the works, some in laying mighty foundations, some in raising the stones, columns, entablements, etc., with vast stones by great and useful engines, others in carving, gilding, inlaying of marbles, plastering, painting, etc., which altogether make a school of architecture, the best probably of its day in Europe."

Wren would seem to have collected many drawings and engravings, for he goes on to say:—"That I might not lose the impressions of them (*i.e.*, of the Chateaux), I shall bring you almost all France in paper, which I have found by some or other ready designed to my hand, in which I have spent both labour and money. Bernini's design of the Louvre I would have given my skin for, but the old reserved Italian gave me but a few minutes' view; it was five little designs on paper, for which he has received as many thousand pistoles. I had only time to copy it in my fancy and memory, and shall be able by discourse and a crayon to give you a tolerable account of it. I have purchased a great deal of Taille Douce, that I might give our countrymen examples of ornaments and grotesques in which the Italians themselves confess the French to excel." This obviously refers

Library at Trinity College, Cambridge.

to the collections of designs for chimney pieces and doorways brought out that very year by Lepautre. Overladen though they are with ornament, they display a grace and a sense of proportion which could not fail to rouse Wren's interest. The influence of Lepautre is distinctly traceable in the rooms at Hampton Court.

He finished his letter by saying:—"I return to England at Christmas, and by that time I hope to perfect what I have on the anvil, 'Observations on the present state of Architecture, Art and Manufactures in France.'" He returned February, 1661, and soon after laid his report on the condition of St. Paul's before the Dean and Chapter. It is easy to trace in the final draft the influence of his Paris observations. After condemning the building both structurally and

architecturally, he proposed facing the inside in the best Roman (Renaissance) manner, and opening up the crossing and covering it with a dome finished externally with a lantern and spire.

Evelyn in his diary refers to the meeting of the Commissioners, and of his agreement with Wren's scheme, which after much contest was agreed to. Five days after this meeting on September 2nd, 1666, the great fire broke out and consumed London. With characteristic energy, Evelyn and Wren busied themselves devising plans for a new London. Evelyn's plan was submitted to the King on September 13th, but Wren's earlier still. Evelyn says: "Dr. Wren got the start of me. Both of us did coincide so frequently that His Majesty is not displeased."

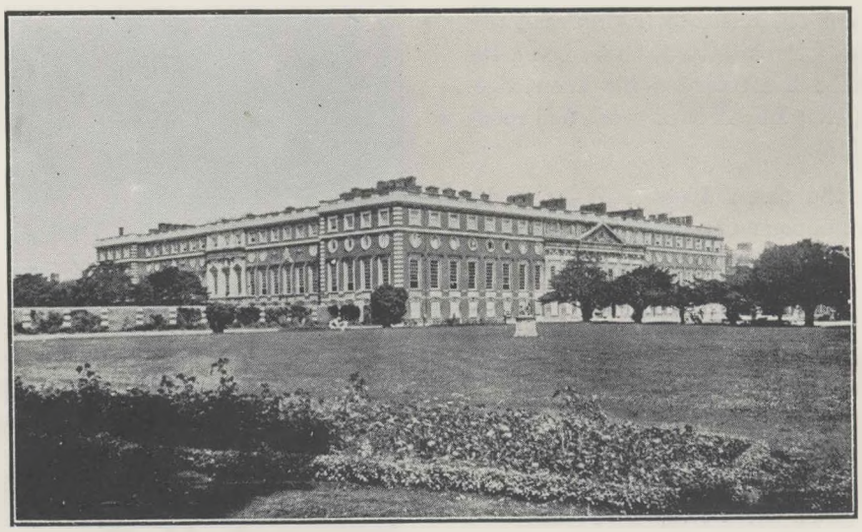
Unfortunately, owing to opposition on the part of the citizens, Wren's plan was not adopted. Had it been, London would to-day rank as one of the finest planned cities in the world, and the millions spent on street widening in the last fifty years have been saved.

Wren at this time was appointed Surveyor-General and Principal Architect for "repairing the whole city, the cathedral church of St. Paul's, all the parish churches (about fifty), with other public structures."

On January 15th, 1667, the King ordered that, until it was possible to do something more lasting and magnificent, a temporary choir and auditory be constructed at the west end of St. Paul's, that portion having been least damaged.

Wren was in favour of demolishing the building, but the King and Cathedral authorities still had hope of effectual restoration. While the site was being cleared, Wren prepared plans for Emmanuel College Chapel, Cambridge. He owed this commission to the Dean of St. Paul's, who had been successively Fellow, Tutor and Bursar of the College. The actual work commenced in 1668, the exterior was completed in 1673, the date on the pediment, the interior 1677. Although not among Wren's greatest achievements, the building is interesting. The classic facade consists of one great composite order of two columns between two pilasters, the greater projection of the columns necessarily a break in the entablature which supports the base of the crowning turret, which in turn breaks the pediment. This is the only example in Wren's work of this motif so common with later architects. Two vases of globular outline take the place of acroteria. On either side is a cloister, giving access to the garden, with gallery over. The mullioned windows are ill-proportioned, the best part of the design being the turret and base.

In 1668 the work in progress at St. Paul's collapsed, as Wren had foreseen, and he was asked to return with all speed to London. It was decided to pull down what was left of the old building, and Wren was instructed to make a model, keeping as far as possible to the old plan. He, however, departed from this, and prepared a design in plan a Greek cross surmounted by a dome, the model of which is still in tolerably perfect condition at St. Paul's.



Hampton Court.

It is a matter of regret to many that this design, which Wren preferred, was not followed. It was disapproved of as not being sufficiently magnificent, and Wren gladly prepared drawings and a further model of a grander conception, which was also rejected, much to Wren's regret, though most critics agree that it would have been most unsatisfactory. The dome surrounded with buttresses of ogee outline, the cramped pilaster order, the disconnected western dome, and the reproduction of Inigo Jones' portico without the depth that lent majesty to it, would never

have combined as do the component parts of the present cathedral. The work of clearing the site occupied eighteen months, 40,000 loads of rubbish being carted away, while all good building stone was set aside for the building of the parish churches. Wren had a staging erected among the ruins, to enable him to scan the site and scheme out his new plan. In 1675 the new scheme was approved by the King, and the foundation stone laid in that year.

Time does not permit me to go into detail of the difficulties encountered in the foundations. We will leave the building at this stage to look at a few other of his works which influenced his design.

The Sheldonian Theatre, Oxford, occupied much of his time, and also the planning of the quadrangle at Trinity, with the chapel flanking one side. This was commenced in 1675, and the chapel in 1692. The interior is characteristic of Wren's work.

Temple Bar was erected in 1670, a task of considerable difficulty: to build across the narrow thoroughfare of Fleet Street an arch of dignity to mark the spot where, in accordance with long-established precedent, the Lord Mayor must meet the Sovereign when he visits the city. The work is in Portland stone. Above the middle arch was a guard chamber, its east and west walls each displaying an order of four Corinthian pilasters crowned by a segmental pediment. It has been taken down, and now stands at Theobalds Park Hertfordshire, as an entrance gateway. At the same time Wren was commissioned to erect a monument to commemorate the great fire. He realized that, for a memorial which should rise above the crowded roofs, no form was better than a single column of colossal dimensions. His original design shows flames breaking out of the shaft to conceal the small windows lighting the staircase, and a colossal figure at the top, after the Roman memorial columns. The awkward brass urn eventually set up is not his design.

In 1672, Barrow, who had eulogised Wren in his inaugural address at Gresham, was appointed Master of Trinity, Cambridge. The library had been destroyed by fire, and Wren was asked to prepare a design. Owing to the lack of funds, Wren gave his services for nothing. The plans and a long detailed description are preserved in the collection at All Souls, Oxford. The building is interesting, as he was committed to a cloister, not only to harmonize his design with that of Neville Court, which it flanked, but because of the damp soil it was necessary, where books were preserved, to allow passage of air between the floor and the ground. The elevation to the court is not very satisfactory, that to the river being better. He attempted to keep the floor level with that of the adjoining buildings, and in order to proportion his arches to those above he filled in the arch with masonry, of which he says he had seen the effect abroad. By doing this the window cills are high, and permit of bookcases against the walls, as seen in the interior.

On the river front a much simpler treatment is employed. The doorways on each side terminate the cloisters of Neville's Court. The central one was intended to give access to a staircase which, however, is placed at one end, and is a fine piece of work with

Greenwich Hospital.

a very excellent iron balustrade. The stairs are covered with a stucco ceiling of refined design.

In 1679 Wren was instructed to design a hospital for disabled soldiers at Kilmainham, Ireland. There is no record of his ever visiting it. Perhaps the best part of this building is the cloistered court with its simple stone arcade, and dressings to the first floor windows, its curious combined cornice and attic, and the rough cast walls. These were originally in a fine red brick.

This building was followed by another hospital at Chelsea, which Wren designed in 1682. The building occupies three sides of a quadrangle, the fourth being open to the gardens and river. The entrance hall is flanked by the chapel and dining hall. Well arranged staircases give access to the upper floors, the woodwork throughout being particularly fine. As a whole it is quiet and dignified, the centre emphasized with a Doric portico and lantern. The chapel has an apsidal end, the hall being square.

Wren's domestic architecture is noted for its external simplicity, from which he never departed even when designing royal palaces. The French chateau is essentially a town house in rural surroundings, whereas Wren's characteristically English tendency was rather to build town houses after country models: long and low, their street doors opening into great halls, and the house complete in itself, girt about with gardens.

The Deanery of St. Paul's is a good example of this, for it would stand appropriately among lawns and woods. It is interesting to note, too, the similarity between this and the delightful town houses at the Cape of the same period. The close relationship between Holland and England during William III.'s reign undoubtedly influenced Wren's work.

But if Wren's houses cannot rival the French chateaux in external splendour, their interiors are, in a way, utterly different, no less sumptuous. Belton House, Grantham, is a characteristic example.

Among other works were the front of Mercer's Hall, demolished and re-erected as the entrance to Swanage Town Hall, Christ's Hospital, Newgate, recently demolished, which was one of Wren's most charming brick buildings. The schoolroom at Winchester, perfect in symmetry and colour, and its restrained ornament.

The Middle Temple gateway of brick and Portland stone is a fine piece of work, little known or seen owing to the narrow and crowded Fleet Street, and also the delightful and well-known Courts of the Temple.

He also built the Town Hall, Windsor, a building condemned by the authorities as not having sufficient support for the floor. Wren put in extra columns, but purposely made them too short. Seen from below they satisfied the critics, but the columns stand to this day, and the space between them and the ceiling has not lessened.

Morden College, Blackheath, 1695, is among the finest and best preserved of Wren's work.

Time does not permit me to deal with the fifty old parish churches, but the more important are well worth considering. In most cases the materials used were very simple, but all of them show the wonderful genius of Wren in the planning. For the towers and steeples there was, of course, less pressing need, which gave more leisure for their designing. They belong, too, to a later period in the architect's career, which makes it desirable to consider them separately.

These churches may be divided into three groups:

1. The domed churches.
2. The galleried churches.
3. The one-aisled churches.

The most important domed church is that of St. Stephen's, Walbrook, just behind the Mansion House. The exterior is the most forbidding of Wren's' elevations, due no doubt to the encroachment of houses around. The entrance is interesting, for the original doors are still there with their curved tops surmounted with spikes to give light and air to the vestibule, whence a flight of thirteen steps lead in to the church. The interior is a clever attempt to give cruciformity to a ground plan, without projections, by the spacing of columns. Strikingly beautiful is the arrangement of light, and the spring of the columns from their tall bases, and amazing the sense of space given to so small an area, only 82 feet by 59 feet. A shallow dome rests lightly on these columns, the airiness of the supports considered by many critics disquieting. It is generally considered that this church was the model for his greater dome.

St. Mary Abchurch, Cannon Street, completed 1686, is another interesting domed church. Externally of red brick with stone quoins, it has nothing of the sumptuousness of the interior, its details being scarcely discernible, darkened as it is by the tall surrounding buildings. The ground plan is nearly square, the shallow projection on the west being devoted to the baptistry and vestry, with organ gallery over. The pendentives of the dome rest at seven points on Corinthian bracket capitals, while at the eighth point a single column allows the organ gallery to pass behind it. In the angles the change from round to square is ingeniously accomplished by means of double grooved vaults, a favourite device of Wren. The dome, painted by Sir James Thornhill, is pierced by four oval windows. The paintings have darkened to a prevailing bronze, which harmonizes with the richness of the oak fittings.

Of the galleried churches, St. Bride's, Fleet Street, is the earliest. Built 1680, the steeple was added twenty years later. The north and south walls have great single windows to each groined vaulting compartment over the gallery the central portion of the church being covered with a simple barrel vault. The church has lost much of its original charm, owing to its having been decorated in gilt, like a fashionable restaurant. The well-known church of St. Clement Danes, in the Strand, is another of the galleried churches. The exterior is of Portland stone, the pavilion on either side of the entrance being covered with cupolas. The interior is noted for its profusion of stucco ornament.

Other beautiful interiors are St. James', Piccadilly; St. Martin's, Ludgate; in which columns have again been used to produce the effect of a cruciform plan, and St. Lawrence, Jewry, noted for its vestry.

Of the one-aisled churches, with flat ceilings, St. Margaret's, Lothbury, is the most satisfactory. It has profited by the spoliation of two other churches.

Before leaving the churches one must refer to the towers and steeples. The finest of all, perhaps, is Bow Church. The simple solidity of the lower stories enhances the effect of the upper. The transition from square to round is very cleverly masked by the curious finials carrying up the lines of the pilasters below and terminating in urns. Above this and enclosed by a peristyle is a circular drum carried up to support the lantern and obelisk above. The whole composition delightfully imaginative, is very charming. St. Bride's is scarcely less imaginative, but no less graceful. The upper part of the design is merely one of precisely similar stages gradually shrinking in scale.

The steeples of St. Martin's, Ludgate; and St. Vedast's, Foster Lane, are generally considered to have been designed as foils to the great dome of St. Paul's.

St. Paul's, the great national church of England, which, like Westminster Abbey, is associated with stirring times of anxiety and triumph, stands in the heart of London, almost at the top of Ludgate Hill.

Among Wren's drawings there are none absolutely identical with the church as we see it to-day. His first two designs rejected, we can only surmise that the great architect always intended to avail himself of the royal permission to alter as the work proceeded. The obligation laid upon him to build a Renaissance cathedral on a Gothic ground plan compelled him to prolong the nave and choir in accordance with Anglican tradition, and there resulted an apparent hemming in of space, in spite of the fact that St. Paul's, with the exception of York, is the broadest of the English cathedrals.

Critics are apt to complain that, on crossing the threshold, they are conscious of certain narrowness and a lack of expansion. Mindful, no doubt, of the great ante-chamber to the nave of Ely, and of the importance of space for state ceremonial, Wren made the first bay of his nave square instead of oblong, by a slight setting back of the piers, and by placing to the east and west of these coupled columns. These last flank the entrances to the side chapels from either of which the beauty of this vestibule can best be appreciated. These sixteen detached columns are the only structural pillars in the interior, piers with pilasters being employed elsewhere. The pilasters are of two orders, the greater Corinthian, the lesser composite. The great cornice of the Corinthian pilasters binds the whole interior together. It forms a gallery with gilded railing running round nave, transepts and choir. Above this cornice is an attic from which spring the nave arches, the lines of which are carried to the ground, giving to the nave that loftiness achieved by the unbroken perpendicular mouldings of French Gothic. The space between these arches is roofed by saucer domes springing above the crown of the arches spanning the nave. This method of construction was common at the time in France, notably in the Sorbonne and the chapel of Val-de-Grace. The architrave and frieze of the main cornice are interrupted by the nave arches, which has been much criticised.

Wren, satisfied that he had imparted lightness without sacrificing stability, pointed to the Temple of Peace, illustrated by Serlio, which shows that the Romans had not hesitated to dispense with the whole entablature, and claimed that the fragment of architrave and frieze represented the ends of wooden beams laid across the aisles, and that the three-aisled structures were derived from a wooden prototype.

Others have criticised the stilting of the arches by means of the attic, justified, however, by the beauty of the resultant effect. He treated the attic storey as though it had been the clerestory of a Gothic church.

It is interesting to study the method Wren employed for carrying the great weight of his dome. Great piers, carrying deeply coffered barrel vaults, are placed on each side of the dome area, spoken of as the legs of the dome. These are not equidistant, being forty feet apart at the four points of the compass, and twenty at the angles. The problem was to bring the crown of the arch spanning the narrow space to the same height as that of the wide.

Before proceeding to the solution of this problem it is important to note the great bastions filling the angles of choir, nave and transepts immediately behind the shorter sides of the octagon. Barrel vaults are thrown from the piers across the aisles to these bastions. Above these and above the chamfered angle

of the bastions is a quarter dome which forms a tie between the piers at the angles. An attic storey above forms the parapet of a loggia over the quarter dome, and from above the angular return of this attic and of the outside pilaster. Wren threw an arch rising to an equal height with those on either side. The elevation cannot be accounted among the happiest of Wren's ingenuities, and is, in fact, the greatest fault of the interior. The treatment of the choir repeats that of the nave, and it is terminated in an apse in which originally stood the high altar.

Wren prepared his choir to receive the organ on either side, but the Dean and Chapter clung to the old monastic tradition of an enclosed choir. Wren, after using every effort and argument, was obliged to yield, after declaring that the beauty of the building would be spoilt by the box of whistles. He, however, designed a fine screen of slender Corinthian columns in marble, the end bays of which terminated the choir seats, and were filled with solid marble panelling. This screen was removed in 1859, and the organs placed in the middle choir arches. The marble columns were set up inside the door of the north transept, and crowned with the panelling on which has been appropriately inscribed the Latin epitaph written by his son and hitherto figuring on the plain slab over Wren's grave in the crypt. The high altar and reredos were erected in the eighteenth century between the easternmost piers, the design being based on a portion of the model prepared by Wren for it.

The north and south entrances of St. Paul's are covered with fine semi-circular porticoes. The bastions were utilised as vestries, except that on the south-west, which contained the stairs to the dome and gallery, the others being used for the Deans, Minor Canons and Lord Mayor. The latter far surpasses the rest in beauty. Its tall panelling is richly carved, the radiating panels of the domed ceiling being enriched with ornament.

One of the most beautiful of the lesser features is the Dean's door in the southern campanile, and just within it is the ingenious stone stair with its beautiful handrail which gives access on the one side to the library over the south-west chapel, and to the western galleries of the cathedral.

The north-west campanile contains the bells, the south-west the clock. Beneath the whole cathedral is a crypt with a chapel at the eastern end under the sanctuary. The portion immediately under the floor of the dome area is given up to the tomb of Lord Nelson.

We will next consider the dome. The drum rises a plain wall of masonry 20 feet above the roof, and then upon a massive course of slight projection comes the peristyle or circle of columns which has been traced to Serlio, whose design was more or less copied by Soufflot for the Paris Pantheon, the main difference between the purpose of Wren's peristyle and that of Soufflot being that in St. Paul's each column veils a buttress and each of his built-up columniations a doubly powerful buttress to resit the especially severe thrust of the springing of the brick cone which supports the stone lantern. This building up gives great strength to his peristyle by preventing any transparency in the side view. "The Romans," Wren says, "always concealed their butments."

The thrust of this cone is further taken up by a double chain of iron set in a channel, the whole being filled with lead. Wren did not consider this necessary, but owing to cracks appearing in the dome of St. Peter's about this time, he took this precaution. The outer dome is constructed of timber and lead, the inner being of brick decorated internally by Sir James Thornhill. Light is obtained from windows in the wall behind the peristyle, and also from the opening above. The stone lantern crossing the dome is among the most delicate of Wren's masterpieces. The cross section of the building is a typical Gothic cathedral with flying buttresses concealed by the blank wall of the upper storey. This construction has been much criticised and condemned as a sham.

Wren considered the sloping roof of a building a feature of little dignity. "No roof," he says, in a fragmentary tract on architecture, "can have dignity enough to appear above a cornice except the circular."

Of late, however, the opinion has gained ground among architects that this huge unbroken mass of wall is essential to the stability of the whole structure, and the pressure of the dome is skilfully distributed so that it is not dependent only upon its supports.

The most striking features of the west front, besides the campanile, are the coupled columns and the two orders employed. Though Inigo Jones' portico of single columns had been extolled by his contemporaries, Wren set himself to design what could safely be executed with the material at hand, renouncing any rivalry with Inigo Jones' ill-fated work. The coupling of columns has been much criticised. The chorus of praise which greeted Perrault's colonnade at the Louvre may have influenced him, but his own defence was an appeal to the twin columns in the Temple of Peace, Rome, of which Serlio's book furnished him with description and ground plan. The campanili, while they form an integral part of the facade, have their lines carried to the ground in the manner characteristic of the architect. The windows of the two lowest stages are differentiated in the approved Renaissance fashion of angle above curve. Owing to the congestion of buildings, it is difficult to get a really good view of the exterior of the cathedral.

Wren's work at Hampton Court consisted of removing a portion of Wolsey's palace, and adding a great quadrangular building to take the place of the old cloister green court for William III. His work, therefore, consists of the colonnade on the south side of the court, the two great stairs known as the King's and Queen's, the fountain court and the long east side and shorter south, facing the sunk garden. William III., loving seclusion and detesting pomp, approved of Wren's design, which resulted in a palace which, with its low, long roof, its uneventful fenestration, its oak panelling and deep window seats, is merely an English gentleman's country house on a large scale. Built of a beautiful red brick with stone quoins and dressings, the two garden fronts at first sight are closely similar, the chief difference being that, whereas the east front has a shallow projection, the south front is slightly winged. Though monotonous in design, the detailing is delightful, and has provided *motifs* for many later architects, including Sir E. Lutyens and Mr. Baker.

The central portion of the east front is crowned with a pediment filled with sculpture, three gateways below giving access to the gardens. The south front has no pediment, but was crowned with statues, removed to Windsor by George IV. The central portion is not flanked by pilasters as on the east front, but the monotony is delightfully broken by the pediments over the central windows on either side, and the festoons in bricks, so popular with Wren. Three sides of the fountain court are identical, while the south side consists of one storey only above the cloister, a storey entirely taken up by the communication gallery between the King's and Queen's apartments, and above it a balustrade which is decorated with vases at intervals, the crenelated Tudor walls are visible. It was no doubt left lower than the rest to take advantage of the sunlight from that side.

The colonnade in the clock court is just such a classic screen as Wren delighted in building to shut out the disturbing irregularities of mediaeval architects. Twin columns are employed, the entablature is of great boldness, and its centre admirably accentuated by escutcheons above the middle columns. Some criticism has been levelled at the spacing of the columns, but it is generally felt that Wren aimed at imparting lightness to the design. Associated with Wren in his work at Hampton Court were the same craftsmen who assisted him at St. Paul's. Grinling Gibbons, whose wood carving is world famous; Tijou, who executed the iron balustrades, balconies and grilles, and the magnificent series of iron screens at the end of the sunk garden on the river front; and Gabriel Cibber, who carved "The Triumph of Hercules over Envy," in the pediment of the east front, and the escutcheons on the south.

Wren's work at Kensington Palace has been so altered by Kent and others that, except for the entrances and stairs, very little remains. But more striking than any part of the actual palace is the banqueting hall or orangery, built for Queen Anne in 1704, which narrowly escaped destruction in the early nineteenth century, and until recently was surrounded by a confusion of potting sheds and rubbish heaps. The building is in delightful narrow red bricks with Portland stone cornice and enrichments. It is interesting to note that for the St. Louis Exhibition the American Government decided to erect some permanent exhibition buildings. A committee of architects was appointed to select what they considered the finest example of the best period of British architecture. This building was chosen, most carefully copied, and duplicated on either side of an open court, the two buildings being linked up with the order employed in Wren's building.

The alcove in the garden was originally connected up to the orangery, but has since been moved and re-erected in its present position, quite out of place, as it was intended to terminate a vista from the orangery. It is very characteristic of Wren's work.

The next building to consider was that built for Queen Mary II. at Greenwich, known as Greenwich Hospital.

A Parliamentary report in 1778 states:—"H.M. Queen Mary, the foundress of the marine hospital, enjoined Sir Christopher Wren to build the fabrick with great magnificence, and being over solicitous for the prosecution of the design, and several times honoured Greenwich with her personal views of the buildings erected by King Charles II., as part of this palace, and likewise of that built by Mr. Inigo Jones, called the Queen's house. She was unwilling to demolish either, as was proposed by some. This occasioned the keeping of an approach from the Thames quite up to the Queen's house, that Her Majesty might have an access to that house by water as by land."

Her Majesty's absolute determination to preserve the wing built by her uncle King Charles naturally drew on the disposition of the buildings as they are now placed and situated. Wren, therefore, completed the block known as King Charles block, using the centre of Queen's house as the axial line. He erected the two blocks known as King William's and Queen Mary's blocks, with their magnificent colonnades, and it was the Queen's intention to elaborate the Queen's house with pavilions and a central cupola, but, owing to her death, this was never completed.

The twin domes of Greenwich are among the finest of Wren's works, admirable alike for beauty of curve and the proportion they had to the colonnade below. Buttressed by clusters of columns at four points, the

drums rise from between an entablature which breaks boldly at the angles. The domes mark the entrances to the chapel and the great hall known as the painted hall.

Wren's career until the time of his great work at Greenwich had been exceptionally free from the harassing persecution of rival contemporaries. He was extremely popular, unassuming, genial and generous. His salary as architect of St. Paul's was £200 a year, with an additional £100 for rebuilding the city churches. He contributed a good deal of this towards the various building funds. He refused any payment for his arduous share in promoting that scheme of national benevolence at Greenwich.

William Talman, an architect of some skill, and comptroller of works, maliciously attacked him with regard to the quality of the workmanship at Hampton Court. The Lords of the Treasury appointed a commission, which strongly supported Wren.

In 1696 he received an unexpected blow from Parliament, which initiated the persecution which embittered his last years. He was accused of delaying the progress of the work at St. Paul's, and in order to encourage him "to finish it with the utmost diligence and expedition," a portion of his salary was to be suspended until the church should be finished. Wren bore the implied insult in silence, and uttered no public protest until 1710, when his work at Greenwich was done. He then petitioned Parliament who, as he says, were well satisfied with the justice and reasonableness of his case, and arranged that the susupended salary should be paid on or before December 25th, 1711.

There were numerous attacks made on him for his high-handed manner in dismissing or retaining workmen against the wish of the commissioners, and numerous tracts were published in which he personally was attacked. In exasperation, Wren wrote a reply to all these charges in 1713, but before it was published an enthusiastic eulogy appeared in the form of a tract, entitled "Facts against Scandal." This and a remarkable essay on "Modesty," which appeared in the *Tatler*, written by Steele, or, as some say, Addison, fully vindicated Wren.

The death of Queen Anne, in 1714, was another great blow, as George I. arrived with a crowd of needy Germans in his train. A new commission was appointed for St. Paul's, and persecution began by a demand that the cathedral should be crowned with an open balustrade. In his report Wren sarcastically states:—"People with little skill in architecture did expect, I believe, to see something they had been used to in Gothic structure, and ladies think nothing well without an edging." He then gives excellent reasons for not erecting a balustrade. In 1718, one Benson, whose cringing impotence marked him out for court favours, was appointed surveyor in Wren's place. A complaint of mismanagement was preferred against him, which was sent by the Lords of the Treasury to Wren to report on. He replied that the charges were groundless, and his closing words are pathetic:—"As I am dismissed, having worn out, by God's mercy, a long life in the Royal service, and having made some figure in the world, I hope it will be allowed me to die in peace." In 1719 the House of Lords urged the King to remove Benson from his employment and prosecute him according to law.

The only feature in St. Paul's attributed to Benson was the unworthy flight of steps at the west end, removed in 1873, and replaced by those which appeared in Wren's design. The balustrade, too, was now put up.

Wren retired to his house on Hampton Court Green, granted him in lieu of a pension, and busied himself with his studies in mathematics. Once a year it was his custom to drive to St. Paul's and spend some time sitting under the dome. On one of these occasions he caught cold. Having returned home, he dined in the bow windowed room on the ground floor, when his servant, wondering at his lingering so long, found him dead in his chair, he having apparently passed away in his sleep.

So on February 25th, 1723, at the ripe age of 91, died Sir Christopher Wren. He was buried in the crypt of St. Paul's in an obscure corner, and for nearly a century and a half there was no memorial in the cathedral to him.

Over the marble screen referred to inside the north door is now, however, inscribed the Latin epitaph written by his son, finishing "Lector si monumentum requiris circumspice," bidding the passer-by look around for his monument.

This brief account of Wren's life and work is chiefly taken from the delightful little book by Lena Milman, to which I am also indebted for the illustrations.

Mr. Walter E. Norman, who has been District Building Inspector in Johannesburg Municipality for nearly nineteen years, has been retired under the age limit clause. The Building Survey Branch presented him with a watch as a token of their regard for his honourable career.

LETTERS TO THE EDITOR.

Dear Sir,

The attention of my Council having been directed to a letter by "Equity," appearing in the December issue of *Building*, my Council would like to point out that the Standard System of Measurement referred to by your correspondent was prepared by the South African Institute of Quantity Surveyors and published in 1913, and accepted by the National Federation of Building Trade Employers of South Africa at their ninth annual congress in 1913.

It is the first document issued by any institute which has attempted to overcome the wide differences in the methods of measuring builders' work in different parts of the country with due regard to local conditions, and the demand for such a system from the contractors who have suffered in the past for want of reliable quantities.

With regard to your correspondent's remarks *re* specification in paragraph 4, my council would draw attention to the fact that it is the duty of the architect to prepare the drawings and specification and furnish the quantity surveyor with copies, and the quantity surveyor's duties are completed when he has embodied in the Bill of Quantities everything shown on the drawings and described in the specification, and nothing should be left to assumption. Furthermore, the Bill of Quantities should so adequately describe the work that the contractor need not have the drawings or specification before him in order to make up his tender.

I am directed by my Council to request you to insert this letter in your next issue.

I am, Sir,
Yours faithfully,
A. LOOTS,
Secretary,
South African Institute of Quantity Surveyors.

Dear Sir,

I have read the article by "Equity" upon Quantity Surveyors and Standard System of Measurement published in your December issue with considerable amusement, but as it contains more than its fair share of misstatements, if not actual slander, I feel that as one who is both a member of the Architectural Association and the S.A. Institute of Quantity Surveyors, compelled to reply.

Firstly, "Equity" would, I think, have made his article more impressionable if he had put his name to it instead of indulging in journalistic sniping. The sniper is not beloved by either side. I agree with "Equity" that the quantity surveyors' position, like the architects, should be an impartial one, and would refer him to the old adage about "people in glass houses should not throw stones."

The S.A. Institute of Quantity Surveyors are empowered to deal with their members as are the Association of Transvaal Architects, and if "Equity" can produce evidence of surveyors importuning builders to be permitted to settling up their accounts, I think that he should do so and not resort to cowardly innuendo.

"Equity's" mention that a number of quantity surveyors (I note he uses the capital letters for the Q.S. but later only gives the architect and employer the small ones) have acquired their experience in builders' offices, is funny. Probably he is not aware that in this town are several members of the architectural profession, which, from the tone of his article I presume he belongs to, who do good work and are generally respected, and who commenced their architectural training other than in an architect's office, and I have not heard that their sympathies are one-sided.

There are undoubtedly a good many architects who are too busy (good luck to 'em) or too lazy—I beg pardon,—who have never troubled to acquire a knowledge of quantities. I rather fancy that "Equity" belongs to the latter category, or perhaps the subject was too hard for him to master.

If "Equity" has had any experience at all worth talking about, he should know that tenders based upon perfectly detailed quantities produce a more accurate estimate of cost than quantities which require the unfortunate builder some considerable time to dissect before he can price properly.

I don't know how long "Equity" has been in this country, probably some considerable period, and he may consequently be regretting the good old days before the advent of the S.A. Master Builders' Federation and the S.A. Institute of Quantity Surveyors, and the mutual agreement between the two bodies as to the necessity of a Standard System, which is followed by the P.W.D. and other Government bodies, and practically all the leading architects in the Union, whether they do their own quantities or engage outside practising surveyors to do so.

Yes, Sir, I think "Equity" regrets the good old days when an architect could issue a bill containing such items as follows:—

No. 1 roof containing (so many) squares of gal. corr. sheet iron with all purlins, trusses, roof timbers, cuttings, hips, ridges, fascia, boards and eaves gutters complete; or:—

No. 1 balcony to the two street fronts, 3 stories high complete as per No. (so and so), page so and so of "what do you call 'ems" catalogue.

Now perhaps he has to work for his 2½ per cent., and not being able to do so, or perhaps I should say is incapable of so doing, he conceals himself under a *nom-de-plume* and endeavours to injure those who are able to prepare a proper and equitable bill for contractors to tender upon.

Yes! I can quite see that "Equity" would like to have the Standard System knifed to suit his own digestion as it is apparent that at present he is not finding it palatable.

Yours faithfully,

D. A. McCUBBIN.

Member of Assoc. Transvaal Architects, Member of S.A. Institute of Quantity Surveyors.

Sir,

In your issue of December last, an article appeared entitled "Quantity Surveyors and Standard of Measurement," by "Equity."

I will endeavour to reply briefly to the salient points in the article.

Your correspondent states that "a number of quantity surveyors have acquired their experience in builders' offices, etc."—although a certain amount of valuable experience can be gained by a surveyor in a builders' office, it by no means constitutes a surveyor's training, but apart from this point I refer him to the list of members of the South African Institute of Quantity Surveyors, and challenge him to state of his personal knowledge the training of any *single* member.

"Builders are often importuned by the former to allow them to do their settling accounts"—it is perfectly true that from time to time contractors who have been "let in" by a faulty Bill of Quantities prepared by what is termed a "five-eights" surveyor will request one to take up the settlement of the final account.

I again directly challenge your correspondent's statement that builders have been "importuned" by any practising member of the South African Institute of Quantity Surveyors.

By the way, do the Conditions of Contract provide for the architect being the arbitrator?—certainly the conditions agreed to by the Johannesburg Master Builders' Association and the Transvaal Association of Architects do not include this precious clause.

Your correspondent next suggests that the architect makes the best surveyor "because he knows what he wants and no surveyor can presume to tell him"—he gives one the impression that the knowledge of quantities is a little side issue which an architect can acquire in his odd moments. It is curious that the leading architects do not share his opinion—can "Equity" name *one* architect of repute in London who prepares his own Bills of Quantities?

May I suggest to your contributor that in the preparation of quantities "a little knowledge is a dangerous thing."

Dealing with the system of measurement, your contributor states "that a Bill of Quantities should bear some resemblance to the estimate a builder would prepare for himself were there no Surveyors' Bill"—does it not occur to him that it is a vastly different matter preparing a rough estimate on which the contractor takes the risk of errors against preparing a Bill of Quantities with perhaps twenty contractors

tendering in competition, and who in turn, if they prove successful, look to the surveyor to recompense them for any errors in measurement or description—as Leaning, in his work on Quantiy Surveying, says: "every year the war of wits between the quantity surveyor and the astute builder's clerk becomes more acute."

I fail to see in what respect it is to the advantage of the surveyor to measure his work "in detail"—it would seem he gives himself a considerable amount of extra work without any recompense—it cannot increase the cost of the work because "Equity" states that "Builders who are really anxious for a job calmly ignore them"; on the other hand it would appear that if we follow "Equity's" practice of "lumping" we should earn our fees more easily—but perhaps "Equity" takes his saving of labour into consideration when charging his percentage?

A further extract from this somewhat curious article states that the present system of measurement wants the "knife," and "it is for the long experienced builders to say what it is they really want to produce"—but have they not already said so? Your correspondent is surely aware that the present system was compiled by a sub-committee of the S.A. Institute of Quantity Surveyors, and as each trade was prepared it was handed to a sub-committee of the Master Builders' Federation—"long experienced builders" who should have known "what it is they really want to produce"—and the Federation of Master Builders not only passed a resolution approving of the system, but actually paid for the necessary copies to be printed in order to make a present of a copy to every architect throughout the Union.

I think any surveyor will acknowledge that the "system" has items which can be improved upon—but I am sure if "Equity" started in to revise the system as a whole he would find it a more difficult task than selecting one or two items out of a Bill of Quantities; moreover, if he chose to submit a bill prepared by himself, I am inclined to think a few small discrepancies might also be discovered.

In conclusion, I would deprecate the general tone of his article, which, in my opinion, is in very questionable taste, and does not make for good feeling between the two professions. It is regrettable that if a man wishes to write a paragraph like the concluding one in his article, that he should hide himself behind a *nom-de-plume*—and such an inappropriate one!

Yours faithfully,

(Signed) FRANK HICKMAN.

NOTES AND NEWS.

Speaking of public buildings, H. A. Vachell, in "Sport and Life on the Pacific Slope," pp. 221-2, says:—It has always seemed to me an incomprehensible blunder upon the part of a people who are shrewd beyond all others in adjusting means to ends that the designing and construction of school-houses, for instance, are entrusted to Tom, Dick and Harry, instead of to a board of State architects, specialists appointed for life, qualified to prepare suitable plans and see them honestly executed. Throughout Southern California, where the sun shines steadily for more than three hundred days in the year, the school-house lacks awnings and broad verandahs. Economy forbids, you reply. Not so. Most of these gimcrack shanties are embellished with towers and cupolas. The instinct for display manifests itself in crude and vulgar decoration friezes, panels, mouldings; what, in short, the people themselves call frills. The moral effect of this upon the plastic minds of the children is not to be ignored. In fine, the gentle art of pretending to be what you are not is ardently pursued in the west, although, like the will-o'-the-wisp, it leads into quagmires.

* * *

Mr. Howard Pim has generously loaned a very valuable and interesting collection of books on art and architecture to the Department of Architecture at the University of the Witwatersrand. The books are being housed at the Seymour Memorial Library, and will be accessible to all art and architectural sudents. The collection includes Holbein's "Portraits of Illustrious Personages of the Court of Henry VIII.," by J. Chamberlaine, published in 1828; Cotman's "Architectural Antiquities of Normandy," published in 1822; Berenson's "Drawings of the Florentine Painters," in two volumes; Wick's "Spires and Towers of Medieval Churches" (vol. 1); Visconti's "Iconographie Ancienne ou Recueil des Portraits Authentiques des Empireurs, Prois Hommes Illustres di l'Antiquiti Iconographie Graecqui," three volumes, and a number of selected drawings from the old masters and of the Dutch and Flemish schools; Hamerton's "Etchings of Rembrandt" and Piranesi's "Veduti di Roma." The above will form a very valuable addition to the present collection of art works at the Seymour Library, which include, it will be remembered, the J. M. Solomon collection of architectural works.

SANITARY NOTES.

After over twenty years' duty, Mr. Manion, Chief Sanitary Inspector of Johannesburg, having passed the retiring age, is leaving the service of the municipality. His familiar figure in our civic corridors will be missed, and our best wishes go with him. His successor has not yet been appointed.

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Mr. W. H. Dobson, lately Town Engineer of Krugersdorp, and a well-known sanitorian, has been appointed Town Engineer of Umtali.

* * *

Mr. Lloyd Davies, F.R.San.I., City Engineer, Capetown, visited Johannesburg lately on an inspection of native housing. Provision has to be made in Capetown for about 7,000 kaffirs.

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Mr. J. Just Niven, City Engineer, Pietermaritzburg, also visited the high veld in connection also with native housing and sewage disposal.

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The annual conference of the South African branch of the Institution of Municipal and Country Engineers will be held in April at Capetown, when Mr. G. S. Burt Andrews, F.R.San.I., will preside. His Worship the Mayor (Major L. Forsyth Allan), with Mr. Andrews, are appointed delegates for Johannesburg Town Council. Major Allen, who is a barrister by training, is also a holder of a certificate of competency as a sanitary inspector, which he gained many years ago by examination of the Royal Sanitary Institute.

* * *

The Royal Sanitary Institute held its annual congress this year at Bournemouth, when the Right Hon. the Lord Mayor of London (Sir John James Baddeley) opened conference, being that of representatives of sanitary authorities. This is the first occasion on which the Lord Mayor has been present at a provincial congress. In his speech he referred to London as the Mother of Municipalities. He might easily have said "great grandmother," in view of the vast number now existing in the British Empire, and the hoary age of his own city authority.

* * *

Speaking of congresses of the Sanitary Institute, it reminds one that ten years has passed since the last congress was held in Johannesburg, or indeed since one was held in South Africa. Now that there is a Public Health Act for the Union, the holding of another congress would be a timely and useful event.

* * *

At the Bournemouth Congress, Mr. Percy Griffith, a well-known water engineer, spoke of the necessity of a national interest and system in control of waterworks. He states that in Germany there is a national oversight, which subordinates, in case of need, private interests or even communal interests. Waterworks are undoubtedly national in character, though in South Africa, so far, they are looked on too much as local undertakings. In case of war, they assume, however, a national as well as a local importance.

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At this same congress, Dr. Ewart dwelt on unemployment and public health. The figure of unemployment in 1918 was 8 per cent., and in 1921, 16 per cent. In the last seventy years the British death rate has fallen from 21·7 per 1,000 to 12·1 per 1,000. The phthisis death rate from 27 to 4 per 10,000; infant mortality from 156 to 83. The index figure of the value of real wages in 1851 was 55, and in 1921, 101, which shows a great change for the better, though probably it has given rise to a more expensive habit of life.

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Dr. Moore, on "Milk Supply in England," said that milk often contained cow dung, and one in every ten or twelve samples of milk produced tuberculosis in susceptible animals when inoculated into them, and that dangerous infectious diseases in epidemic form have been proved to have been caused by milk. The Congress passed a resolution to be sent through the local M.P. to the Minister of Health calling attention to this matter.

* * *

Dr. Naylor Barlow pours ridicule on some ideas of disinfection often pursued. He specially mentions the small boy armed with a squirt in a bioscope who goes about spraying a credulous audience, and suggests that the boy's time and the spray are simply wasted, and advises that it is much better to have a proper system of ventilation.

* * *

As disinfection is generally hopeless unless the micro-orpanism be completely surrounded by (1) a certain strength of the solution; and (2) given a certain time to be so surrounded, and even then with some organisms is not always completely efficacious, he strongly advocates boiling water and sun. Many midwives and nurses and even medical men abuse disinfectants, instead of properly using them. He advocates scrapping all house disinfection. The chief and only consideration is the person affected, and perhaps his clothes and bedding. He considers disinfection of rooms by gas as futile and unscientific, especially when carried out by the ordinary disinfecting staff of a corporation. Cleanliness, the value of soap and water and sun will leave little for the disinfectant to accomplish.

E. H. WAUGH.

THE ASSOCIATION OF TRANSVAAL ARCHITECTS.

Officers and Committees for the Year 1923.

The following officers and committees have been elected for the current year:—

President: Mr. F. L. H. Fleming.

Vice-Presidents: Mr. Allen Wilson, F.S.Arc., Licentiate R.I.B.A.; Mr. G. S. Burt Andrews, F.S.Arc., M.I.C.E.

Members of Council: Mr. N. T. Cowin, M.B.E., Licentiate R.I.B.A.; Mr. J. S. Donaldson, F.S.Arc,; Mr. R. Howden. A.R.V.I.A., F.S Arc; Mr. G. Leith, M.C., A.R.I.B.A.; Mr. E. M. Powers, F.R.I.B.A.; Mr. W. Reid, F.R.I.B.A.; Mr. D. M. Sinclair, F.S.Arc.; Mr. F. Soff; Mr. H. G. Veale, F.S.Arc.

Finance Committee: Messrs. G. S. Burt Andrews, D. M. Sinclair, N. T. Cowin, J. S. Donaldson.

Practice Committee: Messrs. H. G. Veale, R. Howden, D. M. Sinclair, N. T. Cowin, W. Reid, G. Bromilow and E. M. Powers.

Journal Committee: Messrs. E. M. Powers, E. H. Waugh, R. Howden, G. Leith, G. E. Pearse, H. W. Spicer, G. W. Nicolay, G. Bromilow and D. A. McCubbin.

Board of Examiners: Messrs. E. H. Waugh, G. E. Pearse, E. M. Powers, H. G. Veale, P. J. Hill, S. C. Dowsett, H. W. Spicer and Gordon Leith.

Art and Education Committee: Messrs. F. L. H. Fleming, D. M. Burton, G. E. Pearse, E. M. Powers, G. Leith, H. G. Veale, H. W. Spicer, F. Williamson, T. G. Ellis, R. E. Green and A. E. Gyngell.

Seymour Memorial Library: Mr. F. L. H. Fleming.

Architectural Classes: Messrs. F. L. H. Fleming, Allen Wilson and G. S. Burt Andrews.

Town Planning Association (Transvaal): Messrs. D. M. Burton and H. G. Veale.

Associated Scientific and Technical Societies Club: Messrs. F. L. H. Fleming (alternate, Mr. Allen Wilson), D. M. Sinclair (alternate, Mr. R. Howden).

Engineering Standards Committee: Messrs. W. Reid and Allen Wilson.

Pretoria Practice Committee: Messrs. W. J. de Zwaan, T. G. Ellis, P. J. Hoffman, F. Soff, J. G. Kraan, J. B. Wyers, F. Roberts, V. S. Rees Poole, J. R. Burg, F. G. McIntosh, P. Westmaas and P. M. Ware.

East Rand Advisory Committee: Messrs. J. F. Mackenzie, J. S. Bowie, John Gibb, C. J. Wickee, W. J. Sloan, P. Rogers Cooke, J. L. Henderson, W. H. Mason, J. M. Anderson and G. Laidler.

The President and Vice-Presidents are *ex-officio* members of all committees.

MURRAY K. CARPENTER,
Registrar.

67, Exploration Building,
Johannesburg.

UNION PRACTICE COMMITTEE,

At the Conference of Architects and Quantity Surveyors, held in Capetown last January, a resolution was passed to the following effect:—

> "That the Union Registration Executive Committee be asked to accept further duty as a conjoint Committee for the Union Architectural Practice Committee to deal with the matter of revising the new form of Conditions of Contract and any other matter that may from time to time be submitted by the profession throughout the Union."

This resolution was considered and accepted by the Registration Executive at a meeting held in Johannesburg on the 12th March, 1923. Mr. Ernest M. Powers was appointed chairman of the committee for the first twelve months, and Mr. Robert Howden, deputy chairman for the same period.

The secretarial duties to this new committee will be in the hands of Mr. Murray K. Carpenter, 67, Exploration Building, Johannesburg, to whom all members of the profession throughout the Union of South Africa should submit any difficulties they may encounter in the application of the new form of Conditions of Contract and any difficulty which may arise in general practice, for consideration by the Union Practice Committee.

It will, of course, be generally understood that this committee is not to be confused in any way with the Association of Transvaal Architects, or any of the institutes or architectural bodies established in the other Provinces, all of which are represented on this committee. The first function of this committee will be in respect of the form of contract, and the secretary will be pleased to receive such notes of objection or improvement thereto as members of the profession may care to suggest.

THE ARCHITECT AND THE PUBLIC.

Contracts and Building Bye-Laws.

BY A CONTRIBUTOR.

The responsibilities thrown upon the Council of the Association of Architects regarding the above questions seem to suggest that the Council is shouldering a great deal of work that should be done by other individuals.

What does the average building owner know or care of the terms of the contract which he enters into with the builder. He expects his architect to have so thoroughly investigated the matter that he is justified in concluding that his interests have been carefully safeguarded.

What does the average property owner know or care of the building bye-laws, when he is aware that the Architects' Council is in touch with the municipality in framing these bye-laws, and naturally takes for granted that his interests are being looked after.

But is it a fair proposition that the responsibilities of the building owner and the property owner should be entirely thrown on the architect's shoulders.

The architect's position in both these matters should be that of mediator or arbitrator, and his services could and would be of great value in this respect, but he is forced out of this position by the fact that he is expected by both building owner and property owner to look after their interests—and theirs alone.

At no time in the history of Johannesburg is it more desirable that there should be a strong body of property owners representing both these parties above referred to, and who should be doing the work now being done by the architects.

A new building contract is before us, and is now on its trial. Building owners are asked blindly to sign

same simply on the grounds that the architects' and builders' associations have tentatively agreed to its terms, and yet no property owners' association, estate agents' association or ratepayers' association or any such institution have ever seen the inside of the document.

New amendments to building bye-laws are now before the public. It is true that some associations other than the architects have interested themselves in the matter, but it is nevertheless true that the architects have had to undertake the duties of interviewing the works committee in defending the interests of the property owners.

The architects are certainly interested in the matter, though indirectly, and it is to their interests to see that no unjust and unnecessary bye-laws should be passed which may interfere with building prospects, but are the architects in the position to demand that the Council, as the representatives of the ratepayers, should do this and do the other.

What are the property owners going to say when they find that their properties have been so prejudiced by the new bye-laws that they can only obtain two-thirds of the rentable value of that obtainable under the existing bye-laws. Does it not mean that their valuation must of necessity drop one-third or even worse; that the reduction of one-third of their rents is just the difference between their property being exploited as payable propositions and unpayable ones.

What are the ratepayers going to say when they find their taxation on land values is reduced by one-third or more and such income has to be derived from other sources.

And all this for the simple reason that certain slum promoters and slum dwellers are able to get behind the existing bye-laws and defy the Medical Officers of Health Department.

In other words, the legitimate building owner is to be penalised because for some reason or other the slum dweller is able to get behind the medical officer's control.